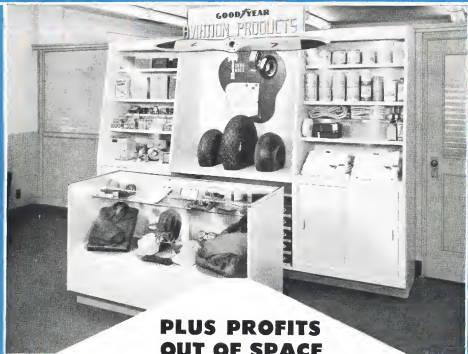


# AVIATION WEEK

NOV. 17, 1947

INCORPORATING AVIATION AND AVIATION NEWS

A MCGRAW-HILL PUBLICATION



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# AVIATION WEEK

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Freedom of loading is just one of the features which save time and money for airlines equipping with the Martin 2-O-2.

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1. 260 mph in cruising speed with 38 to 42 percent gear ... can substitute one ... when possible or actually low break price goes
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### ...paired with the new Sperry G-2 Gyrocompass...

This dependable new mate of the Gyro-Horizon is the pilot's pathfinder. It synchronizes with the world's magnetic field to give extremely accurate directional indications under all conditions of an atmosphere. Equipped with either rotating dial or pointer indication.



### ...can be grouped for pilot's convenience

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## THE AVIATION WEEK

**CLINIC ON TRIAL**—In trying out a new locale and new procedure, the 19th National Aviation Clinic meeting this week at Springfield, Ill., may be as much an end to many in attendance as was the first Clinic in 1945. And success of the new concept guiding the course of the Clinic could give it greater force than ever before.

In a legislative sense, the Clinic has gone through much the same evolution in how political legislative processes. It originated as a forum, with the major part of time and attention given to panels of guest speakers. That year it more nearly will resemble an aviation congress, with the 98 delegates themselves leading debate on bills of policy formulated in advance, finished out in public hearings and then presented to them.

For the first four years of its existence, the Clinic held both in Oklahoma City until both that city's chamber of commerce (which co-sponsored it with the National Aeronautic Association) and many in aviation came to look upon it as Oklahoma City's annual aviation clinic. To remove its national flavor, NAA decided to put the show on the road. The Illinois department of aeronautics was selected as host over several other bidders.

As site of the Clinic, Springfield for this week will be the center of aviation interest. The fact that Springfield, the capital city of the third wealthiest and most populous state in the union, has a new class IV airport, reasonably good airline service for a city of less than 100,000 (eight movements a day), perhaps is irrelevant to the main theme of this year's meeting, although symbolizing a principal reason for the founding of the Clinic.

**BACK TO THE FARM**—At inception the Clinic was part essentially concerned promotion for Oklahoma City and part sincere effort to focus attention of aviation on the importance of the so-called "grass roots."

It soared high on both efforts. By the time it was convened for the third year it had achieved a unique stature and, surprisingly, as identity all its own, dependent is only small measure upon the prestige of its sponsors.

Among other things, it hurried away at the need for a federal airport program, particularly aid for small airports, for prompt, simple disposition of surplus airports, for federal operation of airport control towers after the military relinquished authority, for service aviation. Without attempting to assess the Clinic's share in the result, it is worthy of note that all of those things have come to pass.

This year the grass roots theme will be in a surer key at the Clinic with the lead taken by airport and the need for a national aviation policy.

But this year the 98 delegates to the Clinic will meet in an atmosphere and in surroundings more attuned to the grass roots than modern, air-rich Oklahoma.

Springfield is in the center of one of the greatest agricultural regions in the nation. As aviation's most important percentage coverage upon it they will pass through miles and miles of rich black lands that produce corn in quantities exceeded by only one other state. And many of these travelers will journey to aviation's most significant annual event by rail.

For the first time the Clinic meets in the modernized (microphone on every desk, electric voting machines) chamber of the Illinois House of Representatives in the state capital. The delegates will never be able to forget that Springfield—like so many other grass roots regions—is a major railroad center. A short way down the hill, along that rail, from the capital to the Abraham Lincoln Hotel, many a mile every few minutes along a road that is the heart of the state.

The setting alone should be a goal and a challenge to delegates gathered here to force a policy to derive national benefits from aviation.

**COMING OF AGE**—The National Aviation Clinic developed in a rapid manner. While most delegates were listening to, and generally agreeing with the speakers, a small group would be forming resolutions.

Drawn up in isolation from floor debate, these resolutions did not always reflect the temper of the delegates.

The original Clinic had thus a dual character—a forum to discuss the aviation issues of the day, and as organ of the industry's opinion—each facet of which was not necessarily a reflection of the other.

The Clinic this year will be integrated. There will be few guest speakers. Clinic machinery is modeled after that of most legislatures, with a "speaker of the house" presiding. In theory, at least, debate will be limited to the bills of policy which may be passed, amended, rejected, or tabled in favor of others introduced on the floor.

As in former years, adopted bills will be incorporated in the proceedings sent to each member of Congress.

But, unlike the aftermath of former Clinics, this time there will be an attempt to follow up the actions of the Clinic. No organization represented at the Clinic is bound by that body's actions. There is, however, an implied obligation to promote the industry's principles as clarified in Clinic debate. In the past there has been as consistent twelve-month effort in this respect.

At Clinic parent, NAA in the forthcoming year between Clinics will endeavor periodically to remind participating organizations of what the Clinic has resolved, and suggest suitable action.

In success or failure of that endeavor, even more than in success or failure of the new machinery at Springfield, may rest the future of the National Aviation Clinic as a true force for aviation betterment.

## CHOOSE FROM 8 STANDARDIZED ERIE FUELING UNITS



These 8 standardized Erie Fueling Units provide means of convenience to meet any Airport Fueling demand from the smallest of Airports to the largest of commercial and military fields. Each is designed for safe trouble-free service, simplicity of installation and operation. Outline your Airport Fueling needs. Erie Airport Fueling engineers will give you recommendations based on a wide experience.

Erie builds: Flight-Fuelers with and without pump-out units, Remote Controlled Delivery Type Pump Units, Submerged Torpedo Pump Gasoline Delivers, 400 and 500 Ppt Units and Hydro-Coupled Fueling Units, and in a range of sizes to meet any Airport Fueling demand.



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## NEWS DIGEST

### DOMESTIC

Glenn L. Martin Co. delivered its first Boeing 207 to L.A.N., Chula Vista National Airport, California. Now 10 is a brand new one. Second Boeing 207 will be delivered to L.A.V., Victorville Airport this week.

Shack Aircraft set new outright records in October by flying 2,119,871 two-cycles with an improvement of 2 percent load factor. Official prediction for the company would show a profit for the second consecutive month. October volume was up almost 500,000 two-cycles over September.

### FINANCIAL

Boeing Airplane Co. reports a net loss of \$175,520 for the first nine months of the year on sales and receipts of \$15,207,147. Against this amount was charged \$13,666,935 cost of sales, \$1,890,278 general and administrative expenses, \$793,901 sales and interest, \$491,663 research and \$145,000 provision for excess costs as an experimental contract.

Corporation shareholders approved a plan for dividing the company's relation and association interests, the latter going into a separate company, The Nashville Corp. Following this action, the meeting adjourned until Nov. 28 when also new directors nominated by Atlas Corp. will be voted on.

Curran-Wright Corp. board of directors has approved a call for tender to pay to 500,000 shares of outstanding class A stock of \$18.50 per share until Dec. 8.

Stewart-Warner Corp. reports net earnings of \$1,918,851 equivalent of \$1.49 per share, for the first nine months of 1947 an increase of \$16,936,946. This compares to a \$1,673,295 profit for the same period last year.

### FOREIGN

Merger of Swedish airlines, ARA and SWEA, to form a single unit, along with equal government and private financial interests is now being negotiated. ARA is 90 percent government owned and SWEA privately owned. The latter operates two converted Boeing B-17 bombers intended during the war and recently operated over the Atlantic on passenger flights.

British European Airways carried 255,675 passengers and 5,000,000 lb. of revenue cargo during its first complete year of operation just ended. This load was carried on 75,617 flights over a total of 7,400,000 miles.



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**NEW DEPARTURE  
BALL BEARINGS**

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11



## New Aircraft:

# Douglas Unveils Its New Research Plane

Skyrocket designed for sonic speeds combines turbojet and rocket power; features sweptback wing.

By ROBERT McLAUREN

Douglas Aircraft Co. last week unveiled its new sonic research plane, the "Skyrocket" (D 555-2). The Skyrcket is a design differs slightly from its original layout in a modified version of the "Skylark" (D 555-1). The modification, swept wing, craft has emerged from the Douglas factory, as an entirely new concept in high-speed flight incorporating all of the known ingredients for sonic speed: swept-back, slender, rounded by extensive wind tunnel research work.

The Skyrcket embodies the rocket power of the XS-1 with the turbojet power of the Chance Vought Piston, in comparison with swept wings of low in profile and a swept tail. Long, five main struts low fuselage drag and thrust are which reveal the blunt nose of the D 555-1. Navy, Douglas and NACA engineers are confident that sonic speed with a glided aircraft is now only a question of getting the D 555-2 into the air and striking for the mark.

Skyrocket contains all the available features needed by research both in wind tunnel and by piloted flight, necessary for sonic speed.

• **Power**—For takeoff and subsonic flight the Skyrcket contains a 3,000 hp

thrust Westinghouse T4C radial five barbed engine mounted in the fuselage belly below the wing. Due to its intake through twin NACA-designed ducts an inlet duct inlet in the lower nose. The jet inlet from a flush outlet under the chin belly just forward of the tail. A Reaction Motors four-barrel rocket engine, similar to that used in the Bell XS-1, is mounted in the extreme tail of

the Skyrcket. This engine produces 6,000 lb thrust. The total output of both engines is the equivalent of 15,000 horsepower, comparable to the power of the great Convair XB-56 strategic bomber.

• **Swept Wing**—The stubby, low aspect-ratio wing of the Skyrcket has the same span as the Skyrcket, but is swept back 75 degrees. The increased effective dihedral line of change of angle of attack with angle of yaw created by wing sweep necessitates the use of a cantilevered (negative dihedral) angle of two degrees. By using cantilever, Douglas achieves the equivalent of a straight



wing, whereas a straight wing would have produced the effect of five degrees dihedral, sufficient when not required for stability.

A new feature of the Skyrcket wing is the use of stall control vanes, a so-called "air dam" on either side of the leading edge to prevent spanwise flow and consequent loss of lift over the wing during periods of root shock stall. When the Skyrcket encounters a high-speed gusting at a much number of 2-3, a shock stall is created in the wing root upon edge control in the fuselage. This stall is at a higher position than the uncontrolled portion of the wing, resulting in the stall air being drawn out into the lower pressure of the wing, resulting in the stall spreading across the wing.

The stall control vanes prevent this as leakage and thus decrease the high speed stalling tendency of the wing. To delay the conventional boundary layer stall, conventional boundary layer suction slots are mounted on the wing leading edge over the portion containing the ailerons, to maintain aileron control at higher stalling angles than would otherwise be practicable. The wing is built of 758 aluminum ribs

and stressed to a design load factor of 10, 50 percent higher than military combat aircraft.

• **Swept Tail**—The bent-tail stabilizer of the Skyrcket incorporates a sweep angle of 40 degrees, 40 degrees more than the wing. This dihedral means that the tail will remain installed at a time when the wing is undergoing a shock stall, providing longitudinal stability for the engine during the period and enabling a recovery to be made.

• **Low Lines**—The use of flush air inlet ducts permits the shaping of the forward fuselage in a conventional configuration, ensuring the maintenance of laminar flow over the forward portion of the fuselage aft to the origin of the wing. A fin pointed cone and a lengthening of the fuselage 15 percent longer than the Skyrcket, comprises a high frequency ratio of unity 1.2, a requirement for low drag at high speed.

The pilot is mounted in a fully enclosed cockpit contained within the middle line of the fuselage. The tricycle landing gear is contained entirely within the fuselage to prevent a compromise with the maximum wing thickness of ground fairings upon aerodynamic losses. As on the Skyrcket, are mounted on the after fuselage to provide deceleration from high speed. The fuselage is made of cast magnesium alloy providing lightweight strength and smooth exterior lines. The engine is mounted while to distinguish it from the Chance Vought, and the engine XS-1.

• **Research Instruments**—Standard NACA high-speed research instrumentation developed for the XS-1 and Skyrcket, is mounted in the forward end of the Skyrcket behind the pilot. Integrated and expanded the arm system incorporates an extensive static pressure instrumentation mounted throughout the wing and stabilizer. Gas and air ports in the after fuselage on the vertical stabilizer struts. (XS-1 and Skyrcket used three ropes only on arm system and stabilizer fittings.) A total of 400 pressure sensors are contained in this wing and stabilizer to produce a detailed picture of



pressure distribution over these surfaces throughout the range of airspeeds.

The induced convergence of the sky-scraper, representing a considerable rearrangement of original plan, is indicative of the productivity of the current research program utilizing the XS-1 and Skyrcket, and new findings in wind tunnel and research. This rapid rate of progress suggests a further advancement of the U. S. in sonic research, thus, has probably been believed. The new Skyrcket program to carry this program forward into the sonic regime in piloted flight, a field of investigation now the exclusive province of the United States so far as it proceeds known.

## Douglas Skyrcket

### Power:

Westinghouse  
T4C — 3,000 hp thrust

Reaction Motors  
engine — 6,000 hp thrust

Span — 45 ft 3 in  
Length — 45 ft 3 in

Height — 11 ft 6 in  
Gross weight — 15,000 lb

Design speed — 700 mph at 50,000 ft  
Stall speed at 25,000 ft

Sweepback (Wing) — 75 degrees  
Sweepback (Tail) — 40 degrees

Camberline — 3 degrees  
Incidence (Root) — 6 degrees

(Tip) — 3 degrees

## Aeronautical Board Names Committee on Standards

Members of the special new committee of the Aeronautical Board created to develop standards and procedures for implementing documents reached at the recent Army-Navy-Industry Standards Conference at Wright Field (Aviation Week, Nov. 7) have been named.

• **Industry Members**—Walter A. Perkins, Pratt & Whitney Division, United Aircraft Corp.; Raymond W. Young, Wright Aeronautical Corp.; and C. E. Mertz, Aircraft Engine Division, Packard Motor Car Co.

• **Air Force Members**—Col. M. D. Tucker, USAF Headquarters, Via Standard Plans Development Division, Air Materiel Command, Clarence A. Shook, Supply Division, Air Materiel Command.

• **Navy Members**—Capt. N. A. Davis, Technical Data, BuAer, Captain G. B. H. Hall, Aeronautical Board, and Captain F. C. Foy, Power Plant Division, BuAer.

First meeting of the new committee was held Nov. 15 in Washington. The aeronautical board report says the date Dec. 15.

# Hughes, Bennett Meyers Testify On \$200,000 Loan Proposal

Planesmaker says Air Force general sought job with him and asked financing for personal deals; names Echols as "hate Hughes" leader.

Testimony that Maj. Gen. Bennett F. Meyers, wartime deputy chief of Wright Field's Material Command, successfully obtained a "shakedown" of planesman Howard Hughes for \$200,000 financing on a \$10,000,000 U. S. government bond deal during the time that Hughes' photo reconnaissance plane contract was being awarded, highlighted hearings of a subcommittee of the Senate War Investigation Committee last week.

Evidence on the deal-and-motion deal under which Hughes was expected to make a "down payment" of \$50,000 toward a purchase plan for Meyer-own plane, presented, from Hughes and Meyers in hours of scorching grilling by subcommittee members, Sen. Everett Ferguson (R., Mich.). Neither deal was consummated.

**Other Issues Discussed**—Testimony on other issues in the Hughes investigation was inconclusive. The question of the availability of the government's selling contracts for experimental planes which were not completed for military authorities—the \$22,000,000 contract for three XF-11s and the \$18,000,000 for two new contract planes were threatened by a score of witnesses, good and bad. The extent to which "brokers" as a road into Hughes' contract awards was discussed at length. Evidence of pressure on Hughes' testimony was also given. Although Echols, former Secretary of Commerce James Jones and former AAF commanding general, H. H. "Hap" Arnold, were connected with evidence put forward in these hearings, neither was against Hughes by Army and WPA officials, notably Maj. Gen. Oliver Echols, the wartime chief at Wright Field, where Hughes dubbed "chickens" at the time. Hughes' testimony was given by Miss Gail S. Owen, Recorder at Alabama, argument over whether the investigation was speeded off by the Air Force to "assist" TWA owner Hughes was omitted from the hearing transcript for a few minutes, but was given by Hughes; that the committee appeared interested "only in evidence against Hughes," withheld one Hughes' evidence and that it feared the committee should investigate the Hughes XF-11 contract plane which did not get into mass production. Hughes permitted that PAA preferred government financing of XF-11 development

with an eye to post-mortem purchase of the airplane for service as a transport carrier.

Witnesses' statements on what Ferguson termed "attempts" shakedown by Meyers on Neil McCarthy, prominent Los Angeles attorney whose ability and character were touched on by both Meyers and Hughes. McCarthy, alleged at times by Hughes during the brief war time period that Hughes was "an enemy" of Hughes with Meyer.

**Information, Pled—Only**, after being confronted with McCarthy's secret report of an advertisement that Meyer or Hughes refused to produce any information on the alleged "shakedown." Summary of their conflicting testimony avoided that.

Discussions between Hughes and McCarthy, on the one hand and Meyer, on the other hand, relative to employment of Meyer by Hughes and the Meyer's proposed for purchase of \$10,000,000 in U. S. government bonds for airplane use in 1943—although the exact time was not determined.

Up to and October 29, 1943, approximately the time the discussions started, Meyer, according to telephone conversations, had vigorously opposed the idea of a contract for the XF-11. Although Arnold signed a letter of intent in September, Wright Field of fact built at suggestion of a contract. Meyers testified that he later signed the contract for the XF-11. A telephone conversation between Meyer and the then under Secretary of War for Air Robert H. Coates subsequent to Arnold's decision, disclosed the suggestion of both to the contract. Coates pointed that there would be a criminal investigation and "an awful deal" and suggested, with Meyer's concurrence that a contract should "not be given to any outside source" (specimens can be used in the outside part to an end being).

**Meyers Returned Stand**—But from in 1943, Meyer suddenly became Wright Field's most vigorous prober at the Hughes reconnaissance plane contract. Testimony indicated that Meyer had made important demands such as "why the hell have I got contract here too?" to other officers.

Meyers plainly explained his own

role change by stating that when his position to Arnold was ineffective, he believed "like an officer taking orders" and did not intend to attempt to get the XF-11 contract cancelled and the deal was "production." He has such Meyer on the point, Hughes repeatedly and loudly dissuaded suggestions by Ferguson that Meyer's change might have been due to the coming possibility of obtaining a "shakedown" from Hughes.

Hughes testified that on the advice of McCarthy he turned down both a request by Meyer for a wartime job with Hughes Aircraft Company and a proposal that he sell his \$500,000 home to place collateral on the release of the bonds "nothing I thought I was" anything morally wrong" in either proposal, but because "I felt they might be unscrupulous." In addition to "buying" McCarthy, Hughes said, Meyer suggested him to guarantee against loss—each point did in price would involve \$100,000, which would be advanced to him as soon as the deal was consummated.

**Conflicting Testimony**—According to Meyer's testimony which contradicted that of Hughes and McCarthy, Hughes offered him the wartime job—handling the subject with "I think you were busy as it could be one of you right now" and he (Meyer) turned it down. Meyer declared that the Wright board decisions were based to "concentrate" on the deal to McCarthy, in the purpose of obtaining his legal advice. Meyer's testimony contradicted the fact the size went to press—over having proposed Hughes' financing of the transaction.

Despite McCarthy testimony that he discussed with Meyer, at Hughes' request, the XF-11 project, Meyer said employment with Hughes Aircraft and making a \$500,000 advance on the job contract, neither Hughes nor Meyer could "recall" any suggestion on post-war employment.

Hughes stated that although Meyer was "very busy" when informed of his rejection of his job and bid requests, Meyer "did not have" in any recollection of the XF-11 contract. Hughes said the date of the rejection indefinite, but reported that it was prior to the date on which the XF-11 contract was consummated—August 1944. Thus, Hughes pointed as "recall" that Meyer did not recall his "loan" and job contracts with his official position on the contract. Hughes did not specify, however, whether his rejection of Meyer's requests came before or after Meyer signed the XF-11 contract—May 1944.

Hughes said Meyer "stopped speaking to me for two years." Meyer/Hughes H-Range remained in 1946 when former

TWA president, Jack Fryc, informed Hughes that Meyer, a close personal friend of Meyer William O'Dwyer, "put the fire" on the showing of Hughes' firm, "The O'Dwyer," in New York City and "bought" over a TWA deal for use of Lockheed Airport. O'Dwyer served as broader agent in the Material Command during the time Hughes said he sought out Meyer "to get the XF-11 contract." Hughes said he understood he had "lost."

Meyer's retirement contract with the Army, testimony developed, was based on representing Hughes' military aircraft interests in private life, but only this was after the Senate investigation of Hughes got underway—Meyer did suggest Hughes for a \$500,000 loan. Meyer reported that he and Alvin Karpis, former "Kendall" president, planned to purchase a \$200,000 plane (Douglas) with \$100,000 from an oilfield.

Hughes declared the loan.

## Whelan of Sikorsky Named To Head Helicopter Council

S. E. Whelan, general manager of Sikorsky Aircraft Division, United Aircraft Corp., Bridgeport, Conn., has been elected chairman of the Helicopter Council of the American Helicopter Association, according to Lawrence D. Hall, president of Bell Aircraft Corp., Dayton, Ohio. Whelan is a graduate of the annual Wright Brothers Flying school at Dayton, Ohio, in 1915, when he was 16 years old.

After serving as a civilian flight instructor for the Army, and as pilot in the Rensselaer-Walton Company flying school at Dayton, he went with Pratt & Whitney in 1928, and has been associated with United Aircraft division since. He became general manager of the Sikorsky division in 1943, after leaving United Aircraft's report department for 12 years.

Aspen, Lacon, director of the Rensselaer-Walton Company, president of the Federal Helicopter Corp., will represent their organizations on the council.

## Douglas Decides To Build DC-9

Prototype expected to be flying in one year; aimed at DC-3 replacement market.

Donald Douglas has given the go-ahead to his engineering department in the DC-9 and hopes to have the prototype flying within one year. Douglas feels that the aircraft will be in a position to take to replace the position of new equipment.

Following behind the President's Air Policy Commission, Douglas stated that he expects another the Martin 202 not the Constellation as DC-9's replacement" as well as both DC-5 as a competitor. Different size weight performance than the (jet) engine Douglas said.

**15-Ton Plane**—The DC-9 is a 15-ton two-engine design carrying 35 passengers (for 10-148 ft. useful load) at a cruising speed of 342 mph. It can be powered by either the Wright Cyclone R-1820 or Pratt & Whitney R-1800 engines. Preliminary calculations indicate a takeoff run to clear a 50-ft obstacle of 1,600 ft at standard sea level temperature.

Although previous transport aircraft designs have stressed flexibility of installation, Donald Douglas desires to build the number of various models of the DC-9 to a maximum. Pointing to individual airline aircraft management requirements as an important factor in airplane sales, Douglas noted that there have already been more separate models of the DC-9 of which some 75 have been delivered than there ever were of the DC-3, of which nearly 10,000 were built. These model changes do not add much more detail in color scheme or upholstery, but such differences as cabin bulkheads for compartments, side of fuselage on which entrance doors are placed, etc.

## "Sky Queen" Hearing Bares Inexperience

Impudence and lack of planning characterized operations of American International Airways, whose Boeing 314 "Queen of the Skies" was ditched 32 miles southeast of Newfoundland Oct. 18, evidence at a Civil Aeronautics Board hearing in New York, indicated last week.

Monsters, uncertainty at the legal status of the flight was emphasized by R. Don Reynolds of CAB's legal staff. He pointed out that simply applying the term "charter flight" is an operation does not automatically remove it from the category of a common carrier

and stressed that any flight offered to the general public may be treated as a common carrier operation. Travel agents and brokers involved with passenger transactions before the flight were questioned in an effort to clarify its legal status.

Repeated questioning by R. W. Channing, chief investigator, brought information that lack of experience and planning were vital in the company's operation. Lack of planning was evident in poor arrangements for engine testing, emergency applications for landing rights, inadequate investigation of regulations, inadequate crew rest, lack of crew with schedule, and poor handling of the crew on radio protocol and radio to investigation.

Evidence of one emergency indicated that pilot and co-pilot were unfamiliar with the ocean and the captain had flown only 60 hours in the plane prior to the Oct. 18 flight. The pilot had made only one previous trans-Atlantic flight as navigator and never had been checked out on the ocean, nor had he been informed of weather forecasts given on fixed schedule for planes on route. Yet there was no evidence of crew negligence in the actual flight.

Disregard of radio frequencies allocated by the United States to planes in the field of service and the exclusion of the Sky Queen, a breed of Civil Air Regulations, were admitted by the crew. Observers inferred from the testimony, however, that had the company had observed the involved at the time of the ditching.

## Buys Two Lodestars

Island Airways, Walla Walla, Wash., has bought two Lockheed Lodestars and taken delivery on one, with the second expected shortly, according to Perry Cole, president. The planes will be used on the company's run between Walla Walla and Seattle, replacing a seven-place Beechcraft. Development of the Pacific coast route based at Richland and connecting with McNary Dore on the Columbia River into Pocatello (both points being on Idaho's state route) have used the firm's capacity during the past three months.

## Canadian Nodders

Post service by charter airlines in Canada has resulted in a ban on further licenses until May 1, 1948. By that time a survey will be completed to determine the actual position for non-scheduled operations in Canada.

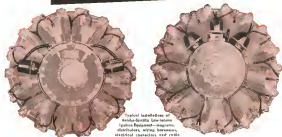






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**SCINTILLA MAGNETO DIVISION of**  
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**Bendix**  
AIRCRAFT CORPORATION

WINTER WEEK November 17, 1947

spikes that are expected to improve mutually control (possibly sought in equipping each blade with an sensor responding to cyclic changes during each rotation).

Also, the new Landgraf model is expected to be the first "top" to fly with gas full actuated, and if preliminary tests are successful a helicopter speed record of well over 300 mph may be expected.

## Brown Named Edo General Sales Manager

Archibald M. Brown, Jr., in the sales staff of Edo Aircraft Corp. from 1914-17, has returned to the company as general sales manager at their College Point, L. I. office. For the past year, he has served as an aviator consultant to General Motors. Previously, Brown managed the Post-Washington, L. I. airplane base, and was Sales Manager for Fairchild Aircraft division of Hugenroth, Md.

In other personnel actions:

**Arch and Helene Friedman** (Philadelphia, Pa.) appointed Frank B. Rosenbaum as general sales manager. Rosenbaum was previously associated with Westchester Electric Corp., in Montclair, Ohio.

**Patricia Alvord** (Chicago, Ill.) named Edo, which is in the line of the production engineering division of the engineering department, its new president, with Edo in Chicago, Ill.

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## BRIEFING PRODUCTION NEWS

► **Northrup Aircraft Inc.** is looking up for production of B 59 landing flaps under a \$1,500,000 subcontract from Boeing.

► **Rohr Aircraft Co.** is looking 600 additional workers to fill another Boeing B 50 contract for subassemblies, parts and stampings.

► **Airline Maintenance Corp.** has obtained a contract from American Overseas Airlines for major overhaul of DC-4s used by AOA. During the overhaul, fuel provision doors opened by CAA for all transports by next Spring will be installed.

► **United Helicopters, Inc., Palo Alto, Calif.** has begun construction of new plant where it hopes next year to begin commercial production of its three-place industrial and agricultural helicopter.

► **Parker Appliances Co.** is now offering overhaul and modification of its altimeter tubes at a fast rate. Latest altimeters will be built into wheels removed. Program is in effect at both Cleveland and Los Angeles plants.

► **Gleason L. Martin Co.** plans to start production of one 2-2-2 per week. Gleason are in their third month around the clock. First and second shifts are full crews, with the third shift smaller. Northwest Airlines has taken delivery of five of its order for ten 2-2-2. Martin is scheduled to deliver this month the first of the two planes ordered by *Louis Armstrong Versailles*, with the second due in December.

► **Continental Ltd.** is now employing 6,000 on its production of DC-4M North Star transport. Company is also doing extensive overhaul and conversion business for airlines of about a dozen countries.

► **Bentley Aircraft Corp.** has purchased for \$94,000 the Government-owned hangar, located, stock house and parking area at end of the road at the Wichita, Kan. plant. Company expects to employ about 65 to 70 additional persons to turn out sub-assemblies and prefabricated houses in the hangar.

► **Adeltech Manufacturing Co.**, subsidiary of the Corbett Corp., had a Sept. 10 building of \$2,850,000—about two-thirds military and one-third commercial—for aircraft preassembly and cooling equipment. Adeltech is supplying preassembly systems in cooperation for all commercial aircraft and most of the military planes. Work on auxiliary gas turbine engines and air turbine starters is also underway.

► **Edo Aircraft Corp.** has changed its name to Edo Corporation due to its increasing activities in non-aeronautical fields.

► **Fluor Manufacturing & Aircraft Ltd.** has discontinued the manufacture of C-47s for the Canadian Air Force, and now is negotiating with Twin Coach Co. for production of motor buses for a Canadian subsidiary of the coach company.

► **Fairchild Engine & Aircraft Co.** has moved the site of its division meetings to its Hightstown airplane plant. Airline business offers continue to be at 30 Rockville Plaza, New York City.

► **Pasco Products Division of Borg-Warner Corp.** has begun construction of a \$128,000 laboratory in suburban Cleveland. It will be used to test aircraft fuel systems.

► **Soler Aircraft Co.** sales for May, June and July amounted to \$3,531,209 on which company realized profit of \$185,517.

► **Laporte Manufacturing Co.** has moved its general office to 2396 W. Grand boulevard, Detroit 2, Mich. Plant recently was moved to Lapeer, Mich.

## NEW AIRCRAFT



With wings disassembled and hoisted to the rear, the plane is loaded by a prop and tossed out of sight in the forest.



The Boeing XL-15 fits any standard 2 1/2-ton Army truck. Wings and tail section are retracted, wheels retracted ahead.

### XL-15 Demonstrates Its Versatility

Boeing liaison plane has a variety of uses in varied climes.



Another example of the wide versatility of the liaison plane is its adaptability as a ski plane. This makes it available to the Army in

use in cold climates and in mountain areas and it has been winterized. Boeing is now at work on a service test program.



The XL-15, being built at Boeing Wichita plant for the Army Ground Force, can be equipped with skis, giving the Army a

replaces that can hold more useful equipment. In this picture, the XL-15 is equipped with skis for winter operations.



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So you've struck it rich... with a plane of your own! Soaking your class in a whole guy new world is the air with a Beechcraft Bonanza! We know the thrill. So we have going round with our heads in the clouds for years! Thing? It's wonderful!

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Phillips 66 aviation engine oils and lubricants, developed by Phillips 66, are specially designed to keep airplane engines cleaner... to help your plane to better performance.

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AVIATION GASOLINE

AVIATION WEEK, November 17, 1947



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**Glidden**



Next instrument layout places utility and good looks side by side. Flight instruments and radio controls are grouped for accessibility.

while ice brackets control stress are placed in less prominent positions. Installation of throttle block is an innovation.

### Flight Report

## Luscombe Sedan Stresses Comfort

Although resembling its two-place forerunner, it is larger and heavier. Performance shows excellent control and climb.

By ALBERT E. SMYNER, JR.

Luscombe Sedan Sedan. The yet to be completed four place product of the Dallas manufacturer, from a distance resembles the two place Sedan. A closer inspection, however, reveals some interesting points of difference.

The leveler had recently had been modified and now features an engine-mounted landing into the large vertical stabilizer and a much larger rubber and horizontal stabilizer. The landing gear is basically the same design as its two runner but all parts are larger and heavier to accommodate the additional fuselage weight and increased power of the 150 hp engine.

The rest of the fuselage has been streamlined and looks much like the body of an automobile with a generous window has been installed in the aft part to improve visibility. Landing lights are mounted in the nose section and

behind the propeller and below the duct to eliminate light reflection during night landings.

► **Interior**—During a recent demonstration of the Sedan, it was noticed that the color of the plane is large and the seating arrangement has been made with an eye to passenger comfort. Conventional front seats have been installed and are provided with folding backs, the seats are adjustable to provide maximum pilot comfort, and seat backs fold flat providing easy access to the rear of the cabin.

The rear seat is exceptionally wide and deep and is set far enough back to give ample leg room to passengers seated on long flights. It is quickly re-arrangeable by detaching a couple of locking pins, and its removal provides space for use as a cargo hold.

► **Instrument panel** is designed for strain, as well as looks. Flight instruments are grouped prominently in the

upper center section and engine controls—throttle, mixture, carburetor heat, primer, and starter—are mounted together at the lower center. Fuel gauges and selector and fuel valve are mounted at the lower left side of the panel near the instrument switch which best control is mounted on panel at lower right. Two glow compartments are installed for storage of small items, one at left can be used as receptacle for radio microphone. Radio installation, a Bendix PNR 10, is mounted vertically in panel and provides five channels VHF and a two-band receiver covering 280-400 kc and 400-1200 kc.

► **Controls**—Dual control wheels operate through the dashboard and dual rudder pedals are standard equipment. Brakes are fitted only on the pilot's side. Parking brake lever is located under the left side of the instrument panel.

Electric trim is operated by a hand wheel located on the left side of the



Section of new twill clearly shows the unusual placement of the two landing lights. Landing gear tubes extend all the way back just inside the opening of the cowling. (All photos Aviation Week)

Side view shows the solid wing structure at the propeller. Note the placement of the rear cabin window and the double door entry of the after cabin wing, and large top window.

throttle block. Flaps are hydraulic, and pressure is provided by a hand pump located on floor to the right of the pilot seat. A release valve is provided to prevent flaps to be retracted unless by an operator or spring, without necessity of further pumping.

► **Flight Deck**—The Sedan is powered by a Franklin 150 hp engine during a Southern lead-pitch propeller. Turning is manual, good visibility is provided by large side and rear windows, the vision of the two banks is good and effective. It was noted that the engine appears to be very tough on the ground, and it creates an amazing amount of vibration throughout the structure.

► **Takeoff**—on normal, although run was slightly longer than was to be expected, we became airborne at about 60 mph indicated against horizon wind was about 4 mph. Climb was made with out flaps at 80 mph and resulted in a vertical speed of nearly 1,000 ft/min with excellent control as all surfaces.

► **Landing**—at 1,550 rpm gave us an indicated airspeed of 130 mph, at 2,000 ft. Most noticeable feature of landing attitude was the position of the nose with reference to the horizon. It appeared to be about 10 degrees below the level position and it was necessary to refer to the instruments to ascertain when the ship was correctly lowered.

The cabin proved to be very noisy and it was impossible to converse in anything approaching a normal tone of

voice, possibly most of the noise was due to passage of wind outside but a noticeable amount came from the engine which even on flight gave an impression of roughness and vibration.

► **Slow flight** was carried out at 60 mph indicated, without flaps, and while good control was maintained with an apparent "mushy" the nose was in such a high position that forward visibility was reduced to an extent that the maneuver lost much of its value.

Flaps are used for glide control and takeoff and little appreciable lift. This, while only one cubic jet has been delivered in the landing speed, but do permit the pilot to make a steep approach to the field. We put the flaps down in flight then retracted them and there was no risk as they were released and the only sensation was of increased speed.

► **Landing** was accomplished in normal three point position and the stall was gentle. These great touch down emphasized the advantage of the Laneville

gear by taking up most of the shock and minimizing the effect of the rough surface of the field on the landing roll.

The Sedan Sedan is expected to fly in the 55,000 class along with Stearns, Riedel and Conant.

#### Boring Stratoput Slated For Early Test Flight

With the first two tests completed, indications are that the Boring X-47 stratoput bomber may make its first flight shortly.

The plane's initial flight will be by low level flying 100 ft, adjacent to the Boring plant at Seattle, as the Stratoput will be flown directly to the Army's field at Moses Lake in Eastern Washington for the flight test program. The Moses Lake expert in crash landings, Boring Field and is also in a better weather zone.

Since being rolled from the plant Sept. 12, the X-47 has been put through a series of pre-flight tests. The six turbo-jet engines were operated at both low and high speeds and the tandem landing gear was tested by towing the plane over ditches and low obstacles. First powered taxi tests were made at low speed, using only two of the bomber's six engines. Brakes, steering and ground stability were tested.

The Moses Lake field has two runways, each 10,000 ft long, with 500 ft asphalt extensions.

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AVIATION WEEK, November 17, 1947

27

## No Place for Vermin



**KOYLON**—the world's most comfortable material—makes life agreeable for vermin. For the very characteristics of Koylon foam make it verminproof. Vermin just won't go near Koylon foam—even if they could build a house in it.

Koylon foam starts clean—stays

clean! That's one of the many reasons why this amazing cushioning and sound-absorbing material is ideal wherever people sleep or sleep. In every way it's best for the people you serve and best in the way it serves you. For the vermin-proofing of Koylon can be provided easily, economically and permanently.

WHEREVER COMFORT COUNTS, PUT

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FOAM  
Comfort Engineering



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The machine cushioning of Koylon foam and keeps your back straight. It's the most comfortable foam in the world.



In any car, the most comfortable of Koylon helps in better driving. It's the most comfortable foam in the world.



P. O. Box 1000, Dallas, Texas

## Concentration on Jet Research Expected to Yield Greater Gains

Allison director of engineering sees more benefits to be obtained from funds spent on turbine development than could result from further piston work.

An assessment of all factors present in the construction and use of reciprocating and gas turbine engines has brought at least one engine pioneer to the conclusion that research funds available for expenditure on power plants should be concentrated on turbine and turboprop engines.

This is the analysis of R. M. Humes, director of engineering at Allison Division of General Motors Corp., now the world's largest producer of jet engines.

Humes' belief is based on the premise that every engine, whether military or commercial, which can be accomplished satisfactorily with turbine engines will be powered by this type, that every possible engine on which the turboprop cannot meet requirements will use turboprop engines and that only such engines as cannot be accomplished with either jet or turboprop will the reciprocating engine be used.

Accomplishment of the mission is intended to consider such factors as speed, range, cost of initial equipment, cost of operation and general performance of the aircraft. In support of the above premises there are now tens of thousands of hours of flying on turbine engines, experience on a considerable number of installations in various types of aircraft and a production background which verify the advantages of this type of power plant.

**Economic Development.** Development funds are definitely limited in a peacetime economy. Their major allocation must of necessity be in favor of clearingcut shortfalls in the supply of jet power that can be made to meet requirements by replacing the various types needed, and in developing those avenues where the most rapid progress can be made.

Humes believes the advantages of applying research and development funds to the turbine are obvious since major improvements in efficiency, output for a given size, is economical fabrication and material usage are possible due to the advances of the product.

Such improvement applies to the power sections of both turboprops and turbopumps, and, by providing basic information applicable to the exhaust

section, even aids in the development of the compressed reciprocating engine. The favorable ratio of funds being applied to turbine development makes the turbine engine's future more certain and the reciprocating engine's less secure according to Humes. Military funds only are considered in the appraisal, as commercial applications in general respect detail refinement rather than new models or type development.

Allison, Humes says, has recently had the unique and interesting experience of producing side by side in the same plant comparable assembly quantities of a conventional type turboprop, an axial flow turboprop, and a two-stage liquid cooled reciprocating engine.

In such case the engine had been tested for production on a turbine basis and the lines arranged for relatively modest production requirements. Significant quantities of each have been built so that the starting and pre-production costs are now down to normal figures.

Uniform overhead, labor, material sources and to some extent, subcontracting have aided in reducing engineering requirements to be made.

The only important variable was the time of peak development on the products and this definitely is a very important factor.

The turboprop engine is at a stage where only careful production

engineering may result in further cost reduction, and costs were shown to be greater complication of the product.

**Turboprop Next Step.** Humes' view, a further production factor bearing the dimensions of the reciprocating engine is that more turboprop production exceeds reciprocating production, the facilities, fuel handling, manufacturing "know how" and operating problems all favor the turboprop engine over the reciprocating engine to meet the remaining range of power plants for which the turboprop is unsuitable.

There has been perhaps too little emphasis on the effort of fuel injection and supply on power plant development. It is more or less obvious that every additional turboprop or turboprop-powered aircraft and requiring high engine fuel which takes the air to reduce the probability of fuel companies producing development or facilities for higher octane fuel because of the uncertainty of its use.

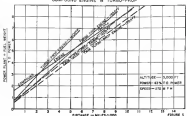
Military pressure to eliminate the more special and higher cost fuels from the logistics standpoint will increase in direct proportion to the percentage of turbine-powered planes in use. This is another major factor working towards the elimination of reciprocating engines in aircraft.

**Turboprop Engines.** Since the turboprop is the first choice of engineers attempting to meet a given set of performance requirements, it is desirable to examine its weaknesses and determine what can be done to make it more applicable to broader specifications, Humes insists.

Disadvantages in order of their importance are poor thrust and thrust, high fuel consumption, variable range with altitude and poor acceleration and deceleration.

Power takeoff and shaft chain drive facilities in perhaps the most glaring

COMPARISON  
COMPOUND ENGINE & TURBO-PROP



weakness of the simple turbojet, but it is also one which something can be done about rather quickly.

Applications of turbine water-alcohol injection was routine and has been in production for over eight months with an increase of 15 percent in takeoff thrust ratings. Weight addition to engine is only 4 or 5 lb and, while the water-alcohol consumption is high, it is needed only for a minute at two, is used up quickly and adds only the weight of pump, lines and tank.

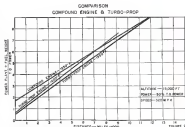
Afterburning or reheat is the next step in supercharging and will take longer to apply, largely because it will involve the use of a variable nozzle and the automatic control of this device into initially a manual to prevent damage to the engine. The higher the percentage of takeoff supercharging, in general, the smaller and more efficient the base engine can be, at cruising conditions.

This is particularly true with afterburning which permits thrust augmentation at all altitudes. It is apparent that every increased pound of takeoff thrust means within the field of turbojet selection and application.

High takeoff fuel consumption is a major problem in turbojet installations. The pressure for higher speeds and improved takeoff has placed the emphasis to date on higher and higher thrust, at times at the expense of increased fuel economy. Additional thrust from afterburning at all altitudes can permit appreciable reductions in fuel consumption at some decrease in thrust and degradation of the base power plant. One of the most conflicting points to an engine manufacturer is the evidence that fuel consumption improvements on turbojets tend to come with a reduction in maximum temperatures and an increase in flexibility.

Variable range with altitude characteristics of the turbojet is perhaps the least desired disadvantage of aircraft powered by this unit. The latter specifies fuel consumption at static sea level thrust that obtained at high speed and altitude is misleading, considering that the range of a turbojet powered airplane is about 1 or 2 at sea level of the usually quoted 15,000 ft range. Afterburning for high speed permitting a smaller base power plant helps the problem in world a variable nozzle. Multiple units with low drag, detail of one unit may be another approach.

Acceleration and deceleration are mentioned by Hehn mainly because the response is slower than might be expected. The variable nozzle and supercharging can help here too. Refinement of design and reduction of rotating weight are obviously indicated as are high compressibility temperature limits for acceleration.

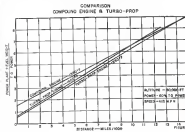


► Turbo-prop. Engines—Turbo-prop. is suitable for the propeller and its companion in the supercharging engine developed over 35 years to a high state of efficiency, reliability, durability and low fuel consumption. To find a place in aircraft propulsion the turbo-prop has to better in certain respects and equal in all others the supercharging engine of base or free piston base row. It has the basic advantage of high output per pound of weight, smoothness, low fuel cost, small size and the important advantage of being readily scaled up or down, once a good basic mechanical design is developed, to the class of engine power requirements.

Expenditure of engineering time and development funds could not be underlaid on a turbo-prop engine without first carefully designing such a unit and comparing it with what could be expected from a compounded reciprocating engine of the same development time, latest before.

► Compound Engines—Aluminum V-1710 engine, is selected as the example only because, there is very complete information on not only the base engine but on turbo-prop supercharging system with fuel injection, supercharger with and without afterburning on the same engine but most particularly because of available data on high altitude tests (to 75% altitude). The nearest variable speed turbine data of the auxiliary is first stage of compression makes the application of a geared turbine for corresponding relatively simple from application, size and control standpoint.

Early complete information is available on water injection takeoff ratings, high takeoff thrust, maximum engine operation over long periods of time, high (Continued on page 14)



## NEW "FLYING CRANE" COOLED BY FEATHER-WEIGHTS



The XHHP, built by the Pasmak Helicopter Corporation in collaboration with the Navy, represents the first successful tandem rotor helicopter. Typical of the advanced engineering that went into this new ship are the FEATHER-WEIGHT all-aluminum oil coolers... developed in the largest, most modern wind tunnel laboratory in the aeronautical heat exchanger industry.

Inherently light, strong, compact, FEATHER-WEIGHT all-aluminum oil coolers resist the extremes of temperature, pressure, vibration and shear which frequently cause oil cooler failures. Inquiries concerning FEATHER-WEIGHT oil coolers are invited. Clifford Manufacturing Company, 560 E. First Street, Boston 27, Massachusetts. Offices in Chicago, Detroit, Los Angeles.

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## Now...the new Navion by RYAN

**A Famous Name in Aviation  
is now producing the leading  
4-place Personal-and-Business Plane**

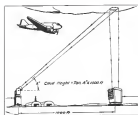
With the *best combination of desirable qualities*, and completely perfected through thousands of hours of intensive operational experience, the Navion has proved its superiority by actual performance under all conditions. Speed without sacrificing safety, power and maneuver combined with clean design that makes low operating costs. Unmatched design in stability that pays off as it "hands off" control and controls riding, even in rough air...high load capacity and variable rate-of-turn ability...that's the unique combination of performance features which makes the all-weather Navion by Ryan the ideal answer for both business and pleasure travel. Check these additional features: Cruising

speed 150 mph...Range 500 miles...Requires only 50 feet to take off 135 feet to land...Hydraulic landing gear, power-retractableicycle landing gear, hydraulic shock absorbers, and four-rudder tail make for yellow-weather landings at slow speed, even in cross winds or on rough fields...115 hp-engines and variable propeller means mild, fast rate of climb...Probably because of its speed, the Ryan Navion can be quickly converted into a light transport capable of carrying 445 pounds of belly cargo in 55 cubic feet of easily loaded space...Both veteran and novice pilots...hundreds of business and professional men...are choosing the Ryan Navion for better air transportation in lower cost

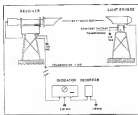
Write today on your business letterhead for fully illustrated brochure and more of details than you will be glad to give you a demonstration. Catalogs can be sent to you immediately, and are filled on request. You'll get further details by ordering your Navion now, with no advance. Address: Ryan Aircraft Company, 401 S. 1st Street, Tulsa, Oklahoma.

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**CEILING RECEIVER:** Beam of a 900-watt mercury vapor light is projected vertically into the air (left) and its reflection off the cloud base is picked up by sensitive photoelectric tube (right). (U. S. Navy photo)



**VISIBILITY RECORDER:** Beam of the uplight is projected horizontally across the field to the receiving station. Time graph of conditions is obtained by placing transmitter and pickups in several locations.

## New Ceiling and Visibility Recorders

Devices that convert light values into electrical impulses take the guesswork out of forecasting airport weather conditions.

Adding a new weapon to the constant fight to increase the safety of bad weather landing operations, the U. S. Air Force and the Navy have ordered from General Electric Co. 125 electronic devices which give a permanent, precise record of the ceiling over an airport.

This instrument combined with a development of the Bureau of Standards which gives similar information significant weather visibility, holds promise of great aid for civilian operations by taking the guesswork out of weather observations at an airport.

While present methods of determining ceiling and visibility at airports are largely a matter of human observation, the GE "Ceilingometer" and Bureau of Standards "Transmissometer" will give constant readings and make permanent records for later selection which will assist meteorologists in making future forecasts.

Both devices compute distances by converting light values during the day as well as at night into electrical current through use of photoelectric cells. The "Ceilingometer" also gives constant readings and makes permanent records for later selection which will assist meteorologists in making future forecasts.

Beam of the Ceilingometer is a 900-watt mercury vapor uplight radiated to a frequency of 1120 cycles per second, the beam of which is projected into the air with the aid of a parabolic mirror. The receiver located 1,000 ft. horizontally from the transmitter, is the photoelectric tube mounted on an adjustable

carriage which oscillates between horizontal and vertical positions in a twelve-minute cycle. The angle at which the tube intercepts light reflected from the cloud base is converted into feet of height by triangulation, and the result recorded as a moving chart on the weather office.



**CEILING TRANSMITTER:** Light source which projects pulsating beam vertically to cloud base on instrument being tested by Navy. (U. S. Navy photo)



**CEILING RECEIVER:** Photoelectric tube picks up the light beam, mounted on its adjustable carriage for recording purposes. (U. S. Navy photo)



**VISIBILITY RECEIVER** Photovoltaic pickup unit for Bureau of Standards receiving device disassembled for view of components.

**VISIBILITY TRANSMITTER** Light source for visibility sensor; shows coded beam light, modulators and controls of the field unit.

During its tests the device worked as accurately as daylight as it did in darkness, and its accurately recorded clouds as high as 20,000 ft. on a single day. The graph also can be interpreted to determine the thickness of cloud layers. The electronic circuit of the unit sorts out the 120 cycle light pulses from background light, amplifies them and then translates the result into a graphic representation of existing conditions.

► **Visibility Average**—The Transmucron (visibility monitor) developed by the Bureau of Standards uses a nuclear

electronic setup for measurement of conditions designed to replace the doubtful accuracy of current methods. Transmitter lights and receiving tube units are placed at several locations around the field in order to avoid erroneous readings caused by local conditions (smoke or dust) showing with portions of the area. The results so far have proved consistently accurate and more precise than the present visual method.

► **Pilot Aid**—Operation of the units requires an special training to that present observation could use the system as

redundant.

Pilots would be able to ascertain more certainly the possibilities of successful completion of low approaches and instantaneous landings as well as the advisability of changing flight plans to avoid dangerous conditions.

A modification of these two devices would offer not only more accurate weather observations for CAA, but would also provide safe operation for planes during periods of low ceilings and reduced visibility by providing pilots with precise data.

## Jet Research (continued from page 30)

enhance back pressure operation and exhaust compressing both geared and turbocharged — the majority of factors essential for successful compressing and accurate calculation.

If there had been no overall results from the types of power plants the model V-1730 would have been revolutionary among compressing engines from the standpoint of specific weight, specific fuel consumption cost per takeoff horsepower or any accepted criteria of engine evaluation applicable to present engines. Harned declares that there was a revolution in types of power plant to be considered, and current studies of the turboprop show that going ahead with a low or three year development as such a compound engine is a highly dubious venture which might represent a major step.

► **Turbo-prop vs. Compound**—The V-1730 is equipped with a turbo-prop on basis of reasonable exhaust temperatures allowing more numerous heat partitions in the compound engine to be opened. Compound is made to comply with most advantages, for long range, to the reciprocating engine and at several altitudes. Figs. 1, 2 and 3 at 5,000, 15,000 and 30,000 ft. altitude show power plant plus fuel weight per takeoff horsepower: versus range in

miles for the compound engine is a turbo-prop averaging similar power over the altitude range.

Conclusion of Harned's comparison is that there is a great deal more work in developing a turbo-prop engine in a given time than in compressing a reciprocating engine. Some engine types apply to the V-1730 with a very low rate of improvement. Since the V-1730 approaches the maximum power in reciprocating engines will give, the advantages would appear applicable to any reciprocating engine.

If it is decided, concluded by Harned that the reciprocating engine has a future only during such time as it is required to develop the turbo-prop in the necessary time.

## Reduce Icing Danger With Artificial Snow

New applications of artificial snow and snow making have proved as successful in recent tests conducted by the General Electric Research Laboratories that plans are being made to undertake further investigation of artificial weather making. These will include making a total forecast, modification of tail section clouds at high altitudes, possibility

of forming clouds in supercooled air, and the reconstruction of supercooled clouds.

Capt. C. N. Chamberlain, Jr., pilot of the GE test plane, reported that seed in a cloud with dry-ice pellets produced large holes which looked as though someone had taken a shovel and scooped out large sections. The holes then formed ridges at the site of those gaps, and it was possible to dump a small cloud within a short time.

On the basis of these tests the scientists estimate that it should be possible for a plane to seed enough of a cloud within 15 minutes to open an area through which the plane could safely descend without danger of encountering icing conditions.

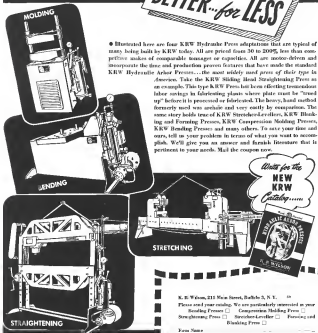
Unmanned aircraft equipped with seeding devices could safely operate during severe icing conditions because the major portion of the way they would fly across the wing level and at altitudes could open a new icing path for themselves down to the airport.

Another consideration of the GE investigation has been the possibility of operating a ground unit for seeding the lower part of clouds over the airport for the protection of planes waiting to take off.

These applications are waiting for the development of adequate generating machines which will permit economical use of the system.

# Name the JOB! There's a KRW PRESS that can do it BETTER...for LESS

Illustrated here are four KRW Hydraulic Press adaptations that are typical of many being built by KRW today. All are priced from 30 to 200% less than competitive makes of comparable tonnage or capacities. All are motor-driven and incorporate the three and production proven features that have made the standard KRW Hydraulic Arbor Press...the most widely used press of their type in America. Take the KRW Sliding Head Straightening Press as an example. This type KRW Press has been effecting tremendous labor savings in fabricating plants where plate must be "tuned up" before it is processed or fabricated. The heavy, hand method formerly used was arduous and very costly by comparison. The same story holds true of KRW Striched-rollers, KRW Bunking and Forming Presses, KRW Compression Molding Presses, KRW Bending Presses and many others. To save your time and ours, tell us your problem in terms of what you want to accomplish. We'll give you an answer and furnish literature that is pertinent to your needs. Mail the coupon now.



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## NEW AVIATION PRODUCTS

### Aircraft Rotary Actuator

Recommended for wide range of low torque, intermittent duty aircraft applications, including operation of antennas, gun, specifiers and landing gear actuators with right angle



drive. It is intended to facilitate location of equipment in tight spots frequently encountered in wings and control surfaces. Known as "Rotary" device is built in Airborne Accessories Corp., 25 Montgomery St., Hoboken 5, N. J. Unit features 240 d.c. synchronous permanent magnet, high efficiency gear reduction, magnetic brake, limit switches (externally adjustable position transmitters (potentiometers type), and AN receptacle including pins for position transmitters.

### Aircraft Beeliner

Designed as portable ground power supply for starting, and for test and operation of equipment in aircraft and jet planes, amphibious aircraft carrier, Type E2A-8001, has maximum rating of 500



amp at 240 d.c. and maximum load rating of over 3,000 amp. Offered by McCole-Clement Corp., 9722 S. Figueroa St., Los Angeles, Calif., unit is 6-phase full wave bridge rectifier, equipped with 11-phase half-wave, is designed

to give smooth d.c. output without the in-rush ripple, also eliminating starting inrush currents in a.c. line. Ripple characteristic of less than two percent is intended to allow operation and testing of radio and electronic equipment. Magnesium alloy pulsed type, containing aluminum is used in solid-state diodes, capacitors, heavy electrolytic capacitors and voltage, and extreme ambient temperature. Packed in one case or towed in truck or pup, unit has self locking brake and provision for mounting of two 30-lb. CO<sub>2</sub> fire extinguishers.

### Aircraft Night Fire Truck

Small and fast responsive unit, designed as airport auxiliary fire control unit is mounted on three wheeled chassis and powered by 6 hp. single cylinder air-cooled engine for 10 mph top speed. Equipment is four 240 and two 5-lb. smoke-impregnated CO<sub>2</sub> bottles and other devices for lighting aircraft ground fire. Truck features new combination automatic clutch and constant speed transmission to permit operation without



gear shifting and allowing fast pickup. Includes electric starter, generator, battery and lights. Capable of being towed within own wheel base length, available unit is built by Monette Corp., 1550 Helms Road, Dallas 6, N. Y.

### Linear Ball Bearing

Showing interesting possibilities in aircraft applications requiring linear or reciprocating motion, new antifriction ball bearing, fabricated by Thomson Industries, Inc., 1029 Main Street, Waltham, 6, N. Y., is composite design of similar unit previously offered by company. Known as Series A, device is intended to reduce starting loads, power consumption, and maintenance, and has hot bar base parts in addition to ball-race, pressed steel retainer, and a pair of rings pressed in made of

the close to position and secure return. Friction is extremely low friction coefficient which prevents rocking and loading, and free riding action under turns, previous adjustment by clamping nut of wear. Units are now available for 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

### High-Intensity Runway Light

Designed to clarify outline runway under all visibility conditions, from clear moonlight to maximum darkness, 100-watt, 110-volt light is offered by Westinghouse Electric Corp., Pittsburgh 30, Pa. Conforming to FAA Specification 130 light occupies two



units, low-intensity upper unit variable in five steps from 85 to 1,500 cp. at 100-watt, and high-intensity lower unit that gives additional five steps from 1,500 to 180,000 cp. High-intensity light is produced by two unidirectional, solid-state lamps at opposite ends of housing, each supplied from separate circuit operated on standard brightness control regulator. When used during restricted visibility, unidirectional light presents lighted base or tip outline to land light. Low intensity lamp is responsive, less assembly mounted on top of high-intensity housing. During normal visibility, this bidirectional element provides visual identification of runway from horizon to assist for any direction of approach, and secure entry safely during low brightness operation. Color screens may be used when desired. Regulate supply current is used, controlled by regulator operating lighting on the other runway. Another new light made in this company for large or small air-



Air travelers are among the most discriminating. They are quick to appreciate and remember soft, clean and beautiful aircraft interior appointments. Rindaplane-Aircraft Upholstery Fabric, specially designed for plane cabins, offers resilient patterns and colors to fit harmoniously with other interior furnishings. Made of finest quality, densely woven wools and worsteds, Rindaplane Fabric is extremely lightweight and long wearing. It has a flat, smooth surface that does not cling to clothing and feels as neat and cool as cheesecloth. Because Rindaplane Fabric is 100% wool, woven flat with a rough cotton looking, it will not support combustion and is highly resistant to stains and dirt. It looks neat and trim even after long cross country hops. In addition, special construction features cut installation time as much as 50% to put your planes in service sooner. Write for complete information and free sample swatches today.

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posts have weight-adjusted cones for quickly identifying runway at stop or daylight, while light at top provides elevated marker at night. Lenses and frame are welded, and entire assembly can be oriented by rotating base and cone support on shaft. Right lights enable alignment with runway for stabilization or after takeoff. Elevated marker light can be used on either 5.5 amp neon or 120/240v incandescent circuits. Five steps of brightness are available from 16 to 1,600 cpw when 30w neon lamp is used and current is controlled by standard brightness rheostat.

### High Pressure Hose Tester

New test machine, based in aluminum cast, by Cerr-Hindsco Inc., Baeleth, N.Y., for static pressure testing (up to 10,000 psi) weighs high-pressure hose test chambers 1 to 2 in. in dia. Test chamber has steel clamp covered with black Plexiglas door for ample protection and instant visibility in event of hose rupture. Pressure outlets and valves are provided in test unit to meet hose tests conveniently. Machine allows shop air pressure to destroy hydraulic pressure by use of air booster cylinder coupled to hydraulic booster cylinder. Test fluid is diesel or light pump type hydraulic oil. Test leads an external connection which leads to the shop air pressure line installation.

### Information Tips

[illegible][illegible]

New Science Flying Studio Report

*It's here! Stepped up in range, speed, payload!*

## The great new Stinson for '48

New? Yes! But more important, the new 1988 Ramsons—of *joined* design—are America's most useful, most powerful, personal phones.

For a Simpson carries four people comfortably and economically—a equally useful for family or business travel. Its roomy interior—newly styled by the famous designer Henry Dreyfuss—provide plenty of business space.

Long time fans prize Stinson dependability and safety. Beginners are delighted with Stinson living ease and simplified control. You can learn to fly solo in ten hours or less.

Visit your Station Dealer for a look at the Station Voyager or Flying Station Wagon. See for yourself why Station leads in popularity in the 4-cylinder field.

For literature write Stinson Dumas, Dept. G, Consolidated Vultee Aircraft Corp., Wayne, Michigan.

For 30 years, holders of America's most useful personal planner

Stinson



Four "fly" models" performed quick take-offs. Slow landings. Cruised at 130 mph at 2,800 ft. Range, 264 miles.



**New, higher pay-load capacity**  
 640 cargo and baggage  
 lbs. plus pilot—or load  
 exceeds with 140 more lbs.



See, greater all-purpose utility  
80% greater range, 14%  
more useful load. Can be  
equipped with floats or skis.



#### New ease of control

Since the new Eight Instruction plan has become and professional was intended to create, the and manuscript W. H. Burke, Jr. General John Brown, Simon, West, Albany.

## AN ALL-PURPOSE BROACHING MACHINE



That's What  
You Get with  
American's  
3-Way

A machine that gives you pull down, push down, and surface broaching, a machine that can be used for a wide variety of internal and surface broaching jobs—that's American's exclusive 3-Way Vertical Hydraulic Broaching Machine. You can change over from one type of broaching operation to another quickly. It requires only replacement of fixture and broaches, and addition of pull head and legs.

For all types of broaching machines, for all kinds and sizes of broaches, for testing and fixture design based on more than a quarter century of broaching experience—look to American, the one source for all your broaching needs. For the best in broaching—overhauls, tools, and engineering—use American first!



To illustrate the wide variety of broaching jobs possible on this all-purpose machine, the Standard T-26 is pictured above.

This machine is operated by manual controls and the broach holder is moved directly on the main machine slide. The appearance is further broaching the work in a second bar with the cutting designed to automatically clamp and eject the broached part.

For broaching the holes in hardened engine parts on American T-26 3-Way machine equipped with special broach, reverse side, foot switch, and electric controls was provided. With the above main machine the operation is semi-automatic. Operator feeds two punches into the machine and, with the foot switch, sets the pressure which lowers broach into work. Machine slide pulls broaches through work, operates outside and inside return on machine slide by foot switch. At end of return stroke the slide two more punches and begins cycle again.

A new circular hole complete story of American's Type T-26 3-Way broaching machine. A layer or part card will bring it to you by return mail. Write today for Circular 100.

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## FINANCIAL

### Continuing Deficit Operations Minimizes Carriers' Dividends

Eastern's omission of dividend typifies airlines' hand-  
banding of resources.

Action of Eastern Air Lines in omitting its semi-annual dividend took many observers by surprise. Indeed, this course is consistent with Eastern's conservative policies. Although one of the most profitable companies in the industry, Eastern has persistently broadened its earnings and it was not until 1945 that it paid its first dividend, amounting to 25 cents per share on the present stock. Last year, 50 cents per share was paid and during the last half of 1947, 25 cents per share was distributed to stockholders.

During the ten-year period ending 1946, the company showed aggregate earnings of more than \$5 per share on the present stock yet paid only the 25 cents indicated in 1945. With a net deficit of \$163,355 for the third quarter of this year compared with a net profit of \$1,062,067 for the comparable period a year ago, it was a natural development for Eastern to cast the semi-annual dividend due at this time. It is possible that the reported loss could have been reduced somewhat if the company had deferred and capitalized part of the company's investments with its equipment liquidation program. Thus it is probable that the reported loss could have been reduced somewhat if the company had deferred and capitalized part of the company's investments with its equipment liquidation program.

**Consolidation.** Outfit-Eastern has completed the acquisition of 14 new subsidiaries involving a capital outlay of more than \$16 million and has used but 35 million of its bank credit to finance this purchase. Working capital funds, accumulated through yearly earnings and not distributed in the form of cash dividends, made this possible. As Eastern is now entering its annual profitable fourth quarter, it should not be necessary for the company to draw down any more of its bank credit. In fact, there is reason to believe that in the near future it may undertake to reduce its indebtedness.

Nevertheless, to Eastern may go the distinction of being the only domestic carrier which paid a dividend in its common stock during 1947. The heavy deficits accumulated by the six carriers this year has made the question of cash distributions to stockholders

very delicate. The attention of most managements has been directed toward equipping fleets to pay off loans along with the financing of new type equipment badly needed to keep pace with the leaders.

Cash dividends, however, are being paid on the three airlines preferred stock issues now outstanding in the industry. American Airlines issued \$40,000,000 in preferred stock in June, 1946. These shares carry a 14 percent dividend rate and all payments have been made when due. Originally sold at \$102 per share, this preferred is now quoted around \$70, indicating a yield of 5 percent.

**UAL.** Preferred-United Air Lines indicated about 95,000 shares of preferred stock reflect this year in connection with its financing program. These shares had an initial indicated market price of around \$105 per share and are currently available at the same price. The dividend rate is \$4.50 per share, making the indicated yield 4.5 percent. The company has maintained quarterly dividend payments when due this for this year. Dividend payments on this preferred were almost paid in full in September of 1947. No. 68 from Western Air Lines. United was directed to charge more than \$2,500,000 of the purchase price to surplus. With United's dividend indicated at \$1,400,000 in full in 1947, the contemplated charge would have resulted in a surplus deficit then requiring its shift to meet dividends on its preferred stock. However, United's dividend indicated from the Card American Airlines to charge the \$1,500,000 plus to "other intangible assets" and amortized it over a period not exceeding five years.

In April of this year Northwest came to market with an issue of 380,000 shares of preferred stock in connection with its financing program. These shares were sold at \$25 per share and carry a dividend rate of 4.6 percent. The dividend is \$22 a share, a yield of about 12 percent is indicated.

All these preferred shares have similar characteristics. To make these issues more attractive, they all contain a com-

variable feature permitting the exchange into common stock. American's preferred stock is convertible into common at \$21 per share, which is some distance from the current price of the junior equity now selling around \$9 per share. United's preferred is convertible at \$15 per share which is only about 5 points away from the current market. Northwest's conversion can be made at \$16.67 per share, which is about 4 points above the present market quotation of the junior equity.

**James Equities.** In all these instances, for practical purposes, it is the junior equities which appear to be supporting the dividend payments on the preferred shares. Consolidated results for the year that indicate such a situation show one piece has deficit operations and have failed to earn any of their respective preferred stock dividend requirements. It is believed that this is only a temporary condition which will soon be corrected with any improvement in earnings. To meet dividends when due on a preferred stock issue would immediately enlarge the credit standing of the carrier involved.

The transport industry was never asked for its dividend income producing qualities. The constant expenses incurred by the carriers necessitated the constant investment of stock earnings that did appear.

American Airlines had an unbroken six-year dividend record on its common stock which came to an end when the company passed the announcement due in 1946. At best, its payments throughout the year were a 10-cent, rather than a 25-cent dividend.

United attempted to undertake quarterly dividend payments of 15 cents per share on its common stock line in 1945. However, the coming of deficit operations forced the company to abandon the policy in 1946.

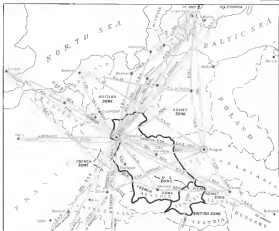
**Delta Dividends.** Delta Air Lines had a continuous string of dividend payments starting in 1941, which was interrupted in 1946. The company also paid dividends back in 1946.

Northwest paid dividends of 50 cents per share on its common stock in each of the four years ending with 1946. However, again, the immediate announcement of deficit operations forced the company to abandon the policy in 1947.

All American Airlines, American Overseas, Eastern, Mid-Continent, National and Northwest have yet to pay their first cash dividends. TWA and Western must go back to 1936 for the record of their first cash distribution to stockholders.

Until such time as earnings improve and the need for further expansion is deferred, changes in dividend policies appear unlikely as it is probable the bulk of available profits will be retained.

—Selig Altschul



TODAY'S PATTERN: Routes Show Present Air Network Serving Germany.

#### Berlin Letter:

## Air Service Vital Problem in Germany

U. S. lines may participate with extensions of present international routes; mail pay and reciprocal cabotage rights are factors. Air Coordinating Committee decision due.

BERLIN—The time has come for the U. S. to make up its mind about a number of policies necessary for development of civil aviation in American-occupied Germany.

Provision of internal service is one of the foremost issues awaiting disposition. The Air Coordinating Committee has this one and is expected to speak up soon.

It is faced with the fact that the rule-

try is not set up to do the job and U. S. carriers are not financially in a position to undertake operation of strictly domestic routes. The course of action which appears most feasible under these circumstances and the one consistently expected involves providing internal service in extensive and off-shoots to U. S. international routes and by authorizing international air carriers of other nations operating across Ger-

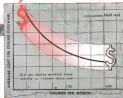
many to make additional stops within the U. S. zone.

The extent to which U. S. carriers can participate is dependent upon the granting of a mail pay guarantee, which, a consular intermediary usually demands of the uncertain revenue factor. Whether supplementary service is to be provided by other carriers is contingent upon granting cabotage rights in the U. S. zone. A decision to grant such

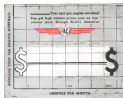
question for airline management...

## How Much for Engine Majors?

Major engine overhauls are expensive—whether you do your own work or not—unless volume is high and constant. Typical cost charts look like this:



Regardless of the number of engine overhauls you need each month, your cost can be low, because you can get high-volume savings through Pacific Airmotive. Your cost chart on PAC overhauls looks like this:



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Airlines and other aircraft operators now contracting their overhauls to PAC profit in these ways: 1. Their overhauls for stops and starts and between their repair investments, are at the bare minimum—a factor of vast importance during low-overhaul periods. 2. Their cost per engine overhaul is the

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AVIATION WEEK, November 17, 1947

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rights in American aircraft industry, in fact, depends upon reciprocal action by the British. However, the British have indicated they will follow and because they aren't in a position to provide internal service any other way.

The Air Coordinating Committee's action in effect, therefore, will determine the internal service pattern for western Germany. The small French part of western Germany is not eligible to present plans but its inclusion can be expected whenever the question arises. Not so with eastern Germany. The Soviets have not been inclined to make their zone part of any internal service scheme.

Present plans call for linking the U. S. zone cities of Frankfurt, Stuttgart, Munich and Nuremberg, the British zone cities of Cologne and Düsseldorf in the Ruhr, Münster, Münster and the part of Hamburg and the U. S.-controlled part of Bremen (an enclave in the British zone). A glance at the map on page 42 indicates that the proposed action of providing this internal service link hardly fits the present pattern of international service, which links the western zone cities with the outside world. Frankfurt, the headquarters city of the U. S. zone and the city destined to become capital of western Germany is the center of a final east-west split in the air. The air corridors of Europe Routes 11 through 15 (encompassing 10 countries) and two U. S. corridors (Pan American Airways and American Overseas Airlines) have Frankfurt stops.

Secret reluctance to grant civil air rights to non-occupying powers operating rights also at across the Rhine, Bonn and the location of the centers of the other occupying powers in "neutral" land tend to diminish the importance of Berlin. (Thus far Berlin has been used by only one scheduled air carrier—namely AOA, at Tempelhof, the British and Russian each during their own zone in their respective sectors of the city and the Thuringians are operating scheduled service into the city as well.)

It is worth noting that KLM recently has been granted operating rights on a long ferry line between Amsterdam and Berlin and the Croydon-Berlin Airlines (CBA) has been granted operating rights on the same. Proper Berlin to the Scandinavian countries. But this action cannot not be accepted as making a general shift to Soviet policy.

Frankfurt, moreover, in view of its strategic geographical location, will remain in U. S. control. The center of Germany's civil air operations, regardless of the future of Berlin. As well as one of the major manufacturing centers, it is a natural transfer point for the

proposed internal service pattern and will continue to be important in this respect even if the Soviet zone is later incorporated into the internal service pattern.

• • •

Another note is for Congressional authority for Civil Aeronautics Administration to operate facilities necessary to the safe conduct of civil air transportation in the U. S. zone. This would include the facilities at air airports (Berlin, Tempelhof, Bremen, Munich, Düsseldorf, Nuremberg and Stuttgart) and the radio services and other aids to navigation along the routes among these airports.

At present, such facilities are inadequate to the extent of real concern for safety. The military is not set up to provide facilities for ICAO standard and is equally unprepared to attend to the needs of the civil aviation. The British (as well as the U. S.) have been established to handle civil aviation matters in the controlled U. S. British zone, the U. S. is handicapped in its participation for lack of such an agency. A significant agreement in this regard is under review by the British, on the other hand, has established in their Civil Control Commission for Germany a CAA organization, which has the authority and the finances to do the job.

The idea of creating this CAA in Germany has to be looked at from this standpoint: the Germans, even when they get a government, will have a department of civil aviation in the foreseeable future. Thus, the future is actually performed by such an agency fall to the occupying powers.

Validation of the costs of civil aviation facilities is dependent upon the extent of U. S. participation such as 1) extent to which Germany may be employed, 2) extent of U. S. participation in air services, 3) extent it is permissible to meet ICAO standards. Other factors which make a cost analysis difficult at this time: 1) recent records do not separate civil and military aviation from military costs, 2) absence of information on the logistic and base-laying costs to be borne by a civil agency, 3) instability of the midwest.

• • •

At last something is being done about the matter of German traveling by air. AOA has received military government permission to carry Germans for income on a basis available from the German Berlin Frankfurt zone. The line will be 110 miles, a figure arrived at by doubling the present fare in accordance with a similar increase in Reichsbahn (German railroad) tariffs.

AOA will be permitted to accept mark revenue up to its own expense limit. Although it is unlikely that revenue will cover mark expenses until some time next year, the fact that Germans are subjected to the mark because will represent a considerable saving for the company. Up to now AOA has had to meet its mark expenses by exchanging German marks for its own currency at the army finance office, while after doing empty seats which could have been accepted in part by mark-paying passengers.

The arrangement has made possible the regular policy. It is a useful measure for developing internal service, in view of the obvious need to meet revenue prospects.

• • •

The Germans are not only denied an aviation industry of their own but also are denied the opportunity to technically specialized labor at air installations maintained by other powers in the Reich. In other words, the intention is to keep Germans out of jobs from which they could acquire technical knowledge of aviation systems in other countries and thus develop a cadre of "know how" that might constitute a "six potential."

Although this principle has never been applied on a large scale, the one of German personnel by the war has not yet been challenged. Still a clarification of the policy, with a view to liberating as far as possible the talent to which Germany can be an important resource. This factor has an important bearing on the "know how" overhead because one of the greatest personnel is obviously lost to the cause.

One thing the Germans will be able to do is build and operate airports terminals. And, Frankfurt, because of its new position as an overseas of Central Europe, already has made a big step in this direction. The city government is building a new building, including hotel, ticket office, baggage claim, etc. An additional construction is now on and both designs are in the air. When the construction is completed, the building will be a window glass, concrete, and timber to store sufficient houses and buildings to house the increased population now assembling here. The prospect of putting up a modern terminal building and the considerable sums of money involved makes it seem like a lot of a waste. But then, what plan what policy, what hope in present Germany doesn't seem like a waste?

—John J. Christie





ready for occupancy. These requests will be made for submission of new bids and contracts will be awarded on the basis of new spot available.

► **Airline**—The Northeast Airlines now serves the city on a limited basis pending commencement of the facilities. Similar service by TWA has been recommended by a CAB decision.

CAB's annual communication station at the field has just been put into operation. It will control the present problem stage that is still under construction—probably a station at or near Worcester—will be avoided.

► **Approaches**—Flight paths approaches to the left-hand field are clear of obstructions and exceed the minimum glide requirements of 15% to one specified by the FAA.

Manager Francis T. Fox has announced a policy of no landing fees for private operators and no extends in such fees to private firms to visit the field, but he stresses the present lack of hangars and parking equipment. On the other hand, he says he would be down and parking facilities will be longer.

## Air Tour Cancelled

Cancellation of the seventh "Avco Golf Air Tour" has been announced by Maj. Al Williams, Golf's assistant site manager. Major Williams said that the plan was taken to lighten the load on referees by saving thousands of golf fees of golfers and so.

The Air Tour was suspended in 1977 and was not resumed until the beginning of the war. Last year it was suspended.



## HEADS NEW FIRM

Robert Seidler is president of Southern Aviation, Inc., Knoxville, Tenn., now conducting and service operations which has acquired exclusive rights for Engineering and Research Corp.'s Cessna (Aviation Week, Oct. 13).

## BRIEFING FOR DEALERS AND DISTRIBUTORS

► **HELICOPTER BASE APPROVAL**—One of the first helicopter airports and flight patterns to obtain CAA approval, apart from conventional airports which are also used as helicopter fields, is Langford Helicopter Co. base adjoining Cavanaugh Field Airport. The Langford Airport is 500 ft. by 1,160 ft. and 21 ft. high. CAA district airport engineer has approved it with a flight pattern for takeoff, departure and approach at 400 ft. beneath the Cavanaugh Airport pattern of 500 ft.

► **SHARING FLIGHT COSTS**—Interpretation clarifying sections of CAR part 43, referring to compensation to private pilots for carrying passengers and ferrying aircraft, has been issued by Administrator T. P. Wright. Regulation does not forbid private pilots to carry passengers who share expenses of his flight. Private pilots may tell by or ferry planes in long or no direct compensation is received for these services. However they may receive salary for actual services not incident to flying, or normal travel expenses.

► **ENAMEL SKYWAY MARKERS**—Permanent Skyway 1 enameled, made of porcelain-enamelled steel sheets, for use with approved CAA markers in simulating known on the new controlling tower for private firms, have been announced by Air Mail, Inc., 75 Midway St., Boston 9, Mass. Complete marker requires a steel plate 18 in. by 26 in. 5 in. is shipped per set anywhere in U. S. for \$75 a set, with paper S-1, N-1 or L markers depending on location of marker site.

► **PLANE RESEARCH AID**—A bill of policy calling for Congressional appropriations for research and development to improve personal planes will be introduced at the 1947 National Aviation Clinic, at Springfield, Ill., this week for action by delegates. The bill calls for research to develop improved wing design for lower landing speeds, higher cruising speeds, and shorter landings and takeoffs; better seat belts and systems for raising and lowering seats; more durable, lighter fuel tanks are needed for standard; improved devices to overcome turbulence using and extensive cooling during engine firing; elimination of stall characteristics; official communications and navigation systems that could be used by all aircraft, except propellers and engines. The bill sets forth that a series has reached the point where these basic requirements must be made to decrease public resistance and increase the plane's safety and safety in its use. The bill points out that the suggested developments would add safety, and expand the potential market for private airplanes. The bill may be one of the most controversial in the Clinic since the Federal Aviation Council has opposed previous suggestions by William A. M. Barden, former assistant Secretary of Commerce for Air, and CAA Administrator T. P. Wright, that a government research program for such personal plane advanced development, be established. Whether industry has changed its viewpoint in light of more recent developments, or whether it might go for some other type of research, then the suggested CAA projects is likely to be used this week in the clinic sessions.

► **BACK IN AIR FINANCE BUSINESS**—Intestate Air Credit Corp., at Minneapolis Municipal Airport, has announced it has resumed aircraft financing, in the face of several withdrawals from aviation financing by national financing companies and restrictions on other available credit. Henry A. Shaffer, head of the Minneapolis company, states that his plans are the same as those offered before the war, with no increase in rate or restriction of ability. The assumption was due to a number of requests from private customers among dealers and distributors and airplane factories, Shaffer states.

► **SCINTILLA SERVICE APPOINTMENTS**—Pacific Automotive Corp., Berkeley, Calif., has announced appointments at the following local bus operators as authorized service dealers for Scintilla Magneto distributors, Reader Aviation Corp., for which PACC is a distributor: A. W. Whelan, Portland, Ore.; Central Aircraft, Inc., Yuba, Wash.; Southern Aviation, Yuma, Ariz.; Phoenix (Arm.) Aviation Corp., and Skybirds, Inc., Tucson, Ariz.

► **GI PICKUP SERVICE**—Fixed base operators seeking to increase their GI flight school commitments, and willing to go beyond the immediate area of their airport for business can follow the example of Avco Industries Inc., operator at Waco Field, near of Alamo, Mich. Avco Industries has arranged with its N. Kelly, a former user the small Idaho town of Ketchikan, to use one of his fields as a landing strip. That construction for over the Kelly area, pick up GI cadets from the Ketchikan area, and take them back to Cramer d'Almeida for instruction and landing practice at the airport. Eight students were enrolled for the pickup flight school program at the beginning of the special project.

—ALEXANDER MCGURLEY

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AVIATION WEEK, November 27, 1947

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## Veterans' Administration to Back Slash in College Flight Training

Assistant administrator compares flying with dancing and golf courses in defending agency stand.

By ALEXANDER McSURRELY

Unless there is a reversal by Gen. Omar Bradley, Veterans' Administration, in advance Congressional action, the much-criticized VA September 10 ruling affecting GI college students taking elective flight courses will stand without major modification. H. V. Strling, assistant administrator, has released AVIATION WEEK.

A recent modification of the ruling apparently designed as an answer to charges that VA is interfering with college and university curriculum, making it now being considered however and may be rescinded about Dec. 1 if approved.

**Proposed Change**—This change would provide for a GI college student, taking elective flight training as a part of his regular college course, to pay a small portion of the flight training cost from his current allowance without the accelerated rate of charge against his allowance, which the Sept. 10 ruling requires. In effect VA would pay flight training costs at the rate of \$20 for each semester hour of college credit granted for flight training.

Some few additional restrictions grant much college credit for flight training. Strling states, the amount of credit under the proposed modification would be a minor consideration in the total cost of a flight course. The cost of the course could not be taken out of the year's college tuition allowance but would have to be paid for out of subsequent year's allowances.

**Redeemed Interest**—In a two-hour exclusive interview, Strling and A. H. Marsh, VA director of flying facilities for vocational training and education, made categorical denial of state reports current in aviation that the VA is seeking to expand flight training for GIs. Significance of the denial was lessened however by Strling's comparison of a six semester hour of the value of private pilot training for the GI with taking a course of golf lessons or dancing instruction. Reflection of that Strling was paid in action of his misdeeds into the field, in perhaps the best explanation of the VA's reluctance to flight training which is reported.

Asked about reports that some VA headquarters in the field have "gone strike" operations to accept compliance not in keeping with state agency request.

ments under penalty of having contract renewal stopped. Strling continued, "Don't the operators know what their rights are, under the Act?"

Both officials however presented to take action on any specific reports received of cases where field VA officials had interfered with their authority in dealing with local flight operators, or had used their contract renewal to influence local conditions on operators.

As AVIATION WEEK readers would be, VA's such reports are referred to officials in the field. Copies to H. V. Strling, Assistant Administrator, Veterans' Administration Bldg., Munitions Bldg., Washington, and to Alexander McSurrely, AVIATION WEEK, National Press Bldg., Washington.

**Ruling Criticized**—Veterans' Administration Sept. 10 ruling for accelerated payments by college students who intend to elect flight training in their college course was sharply criticized as a violation of the National Association of State Aviation Officials, recently at Ft. Worth.

The resolution in full follows: "Whereas, Public Law 365, as amended by Public Law 385, known as the GI bill of rights, grants to educational institutions, approved by appropriate state agencies, the right to offer courses which in the judgment of the educational authorities should be available outside in education in the possession of a major academic course of study, and

Whereas, heretofore the Veterans' Administration has recognized that the provision of the training and privileges to certain veterans includes including aviation training, in education since the VA has paid fees for all services on the same basis; and

Whereas, a ruling of the Veterans' Administration of September 10, 1947, effective September 1, 1947, provides that a student who elects aviation training as a part of a course of study shall have his tuition charged to an accelerated rate for the total cost of the aviation elective, which is not true of any other elective, and which in effect denies the veteran the right to select aviation training on the same basis as other elective and sets it aside as a separate course of study, with the result that the veteran of the minimum one of his entitlement and

Whereas, recognition has been given by the National Association of University Administrators of An Age Education, in their written expression, that aviation training, with flight training as a necessary component thereof, has become a definite part of the educational, commercial and cultural life of our country; now

Therefore, be it resolved that the National Association of State Aviation Officials, in convention assembled at Fort Worth, Texas, vigorously protests the Veterans' Administration ruling of September 10, 1947, affecting aviation training as an integral part of an accelerated elective offered by colleges and universities under the GI bill of rights, and requests the rescinding of such restrictive ruling.

**NAAAO Questions**—At the Ft. Worth meeting a report on the GI flight program from 24 states was tabulated by NAAAO and among results reported were the following:

**VA Refused**—VA refused to consider requests and numerous hours for any flight course?

A Yes (11 states) No (11 states)

**Q** During the past year has the VA changed its policy in handling requests charged by flight schools in your state?

A Yes (11 states) No (11 states)

One state reported all its schools receive standard rates of \$8.50 for solo hours and \$11.50 for dual hours.

Widespread effect of the GI flight program on the aviation industry is indicated by the impact which shows that approximately 1,325 flight schools in the state reporting are participating in GI programs. VA officials reported that a total of 69,618 students have participated in GI flight programs, while the others had no total figures as participants. Twelve states reported a total of 6,695 total of 1,325 flight schools completed courses, while the others 12 had no statistics on course completion.

The report indicates that the program in all of states of GI flight schools to aviation students is approximately 33 percent GI and 17 percent civilian.

**Close Supervision**—Strling declared that Veterans' Administration is issuing flight schools be different from any other "vocational" schools operated for training, which were training veterans under the GI bill of rights. He points out however that VA is supervising all property schools more closely than public-owned colleges and universities reported not for public but for students of overcharges and other irregularities.

The assistant administrator admits that most of the "grip" from flight school operators came from some who are seeking to use the change in bid to the state increased costs making the higher charges necessary. He admitted however that flight schools had been

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aligned along with all other types of industry by increased labor, finished goods, and materials costs in the last year.

And he states that many education and flight school operators are aware of his work on his viewpoint that the flight sector for the average citizen is not unprofitable, unless it leads to an aviation pilot's job. He also cites cases of flight school operators who have developed GI students to staff, and complete ground courses, without a physical examination, when they must not previously qualified to fly.

**James College Case**—The Sept. 10 meeting also may have been a case involving a junior college in the southwest. Striking news investigators indicated the college had been subjected to undue pressure by a commercial flight school operator to institute an aviation course among its students. He did not cite one other similar case, after an invitation by this writer to do so.

The assistant administrator from a representative of some type of government sponsored civilian pilot training, which will enable younger students to learn to fly at nominal costs, and believes it will be of most benefit to aviation that the GI flight training program. Average age of veterans taking GI training is 27.

At the recent NASAD convention the aviation directors noted another resolution calling upon the CAA and the Department of National Defense to consider adoption of a national civilian flight training program for continued stimulation of flight training as a national benefit as necessary for the national economy and security. This same resolution that the VA aviation training program eventually will be discontinued.

Striking news that the old VA policy of allowing students attending colleges that had flight courses as civilians, to fly for the cost of their courses from their current year's college tuition, disallows insurance \$5000 to be effect a declassification against GI college students attending colleges and universities which had no civilian flight courses. Since the Sept. 10 ruling all are on an equal footing; for they are charged separately for flight training and for other college costs in any case.

Private aviation, the original aviation branch of the Sept. 10 ruling, which was announced to take effect at Sept. 1, resulted in a modification of this feature. VA later agreed that any GI student who had already spent up to one civilian flight course at a college could take the rest of that course during the current school semester in term, out of his own allotment, without accumulation of charges. But is soon as the semester is over and charges cease, continuing the flight course would result in a suspension of charges against his entitlement of VA funds.

## Ask VA Field Check

Noting that the Veterans Administration has caused a law making it mandatory of training for pilots, by assuming jurisdiction over training standards, the National Association of State Veterans Officers has passed a resolution protesting action of VA in permitting deviation to certain individuals of requirements for GI flight training, which are in direct conflict with the prerogatives of the state governing agencies as granted in the GI bill of rights. The NASAO resolution is one of two concerning VA, since that VA immediately take necessary steps to correct that practice and forth with establish direct communication with the state governing agencies.

## New Luscombe Plane Will Sell For \$6,995

Prototype of the new Luscombe four place Silver model, all metal 165 hp personal and business plane, has been set at \$6,995. Bentley Delta, Luscombe Airplane Corp., Springfield, Laquid II P. 3242, announced last week.

Despite the fact that CAA tests have not yet been completed, a number of deposits for purchase of the airplane have already been received. There is the latest announced for an all-metal four place, although the four-place Stevens Viaggio and Flying Station Wagon (three-control) are priced approximately \$11,800 less at \$5,575 and \$5,325. Bentley, Warren, Mass., respectively.

Closest competitors will probably be between the Stearns, the new Luscombe and the new all-metal four-place Corsair 170, which made its first flight last week. Whichever by the local CAA inspectors. K-1s are complete except for engines, allowing the constructor a choice of power plants.

But President Ray Application feels that the product desired in the aircraft industry today is the quality of super planes being sold by the government. There, he says, are outstanding new airplanes to such an extent that even construction is not based out of budget, but a lack of market for these products. His company's list was dropped to resist this competition.

Darts at the factory will for \$4,275. The construction kit for the most phase for the first year is rapidly filling up, with a dozen planes to build available in stage in addition to other assemblies in progress.

Luscombe's principal current pro-

duction contracts with the two-place all-metal 65 hp motor model, which is projected at \$1,291 with Nov. 30. Then the price goes back up to \$2,495. Kite reports that response of local buyers to the bargain price is in an attempt to replace school of aviation with all metal equipment, has been good.

Representative selling points of the new four place Luscombe in relation to its basic characteristics (described in a flight report in engineering section, Aviation Week, this issue) are: economy of costs and excellent visibility. Other outstanding features are the ease of construction of rotors and wheels so that pilot can fly the plane using either rubber-tire or wheel alone, and still have rubber control for covered landing and the new covered steel bush landing gear legs, which have flexibility in all directions, something like the action of a twisted steel fishing rod or golf club shaft although considerably stiffer. CAA is attached to a conventional all spring shock absorber set at the bridge.

## Dart Campaign Offers Plane Construction Kit

Dart Aircraft Corp., owner of the stocks and patents of the old CAA or Aircraft Co., has issued a new sales campaign with the offer of a lot of pre-engineered factory parts which can be assembled in new licensed A & B mechanics.

The sale of kits is aimed at schools and field base operators who could make double use of the material, first as a project in aircraft construction for ground school students and second as an assembly under after construction when it could eventually be used in flight training courses.

All parts of the kit are CAA approved before they leave the factory and are "Whispered" by the local CAA inspectors. K-1s are complete except for engines, allowing the constructor a choice of power plants.

But President Ray Application feels that the product desired in the aircraft industry today is the quality of super planes being sold by the government. There, he says, are outstanding new airplanes to such an extent that even construction is not based out of budget, but a lack of market for these products. His company's list was dropped to resist this competition.

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Luscombe's principal current pro-

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be extended that the total cost of making the proposed changes on 417 four engine aircraft operating in 1986 would be in the neighborhood of \$171,000,000.

ATA noted that while safety stand ards for planes out of scheduled passenger operations were being tightened unscheduled carriers, using the same type of equipment, were unaffected.

## NWA Arbitrating Wages With IAM

A recent wage demand by the International Association of Machinists (IAM) against Northwest Airlines is being arbitrated under the Railway Labor Act before a three-man arbitration board in Massachusetts.

The issue, representing some 1,500 ground engineers throughout the North west system, is seeking wage rate increases that would give the workers the same "purchasing power" as a 44-hour week, today that they had on a 41-hour week in November, 1981. According to the union, this would cost for an 18 percent boost.

IAM is making the same demand on Chicagoer Airlines, where it recently was negotiating wages, and expects to present it to other carriers.

Arbitration hearings on five and 13 other union issues last week before a panel headed by William M. Levenson, former chairman of the National Mediation Board. Other panel members are K. B. Ferguson, NWA vice president, and George H. Pedersen, IAM official.

The union, which struck the airline last year, also seeks an additional week's vacation after 10 years of service. It wants Washington's holiday added to its own holidays already in its contract and shift premiums increased.

## Pacific Northern Tracts Grievances To Court

Pacific Northern Airlines, Anchorage, Alaska, has filed complaints in the industry's federal court asking that Alaska Airlines and Northern Airlines be as good as nonexisting to scheduled routes from carriers between Seattle and Alaska ports as violations of the Civil Aeronautics Act.

PNA, which is certificated within Alaska, has traffic to and from Seattle through a connection with Pan American Airways at Los Angeles. Alaska Airlines also is certificated within Alaska, while Northern Airlines is a non-scheduled carrier based at Seattle. PNA asserts that Alaska Airlines' charter flights to Seattle and Northern's scheduled flights on the route exceeded the number permitted by CAB.

## SHORTLINES

► **Autumn**—Reorganized service to Midland-Gloss, Tex., and Springfield, Ill., ends this month.

► **Capital**—Plans to start service to Charlotte, N. C., on AM 51 about Dec. 1. Cancellation during October flew the greatest freight volume in its history—990,071 ton crates—up 57 per cent over September. Cargo schedules will be increased shortly.

► **Chicago & Southern**—Reports air freight tonnage reached a new all-time peak in October.

► **Eastern**—Last week planned to initiate a reduced 55-hour roundtrip revenue fare of \$150 plus tax between 11 eastern U. S. cities and San Juan, Puerto Rico. The rate represents a cut of up to 22 percent.

► **Northwest**—A special stockholders meeting called recently to vote on issuance of 35,513 shares of preferred stock at \$20 a share has been adjourned to Nov. 24 due to lack of sufficient proxy. Atlas Corp., which owns about 20 per cent of NWA's 900,000 outstanding common shares, has promised to purchase any of the new preferred shares which remain unsold.

► **Northwest**—Reports its management move over its new address to Cleveland, Pittsburgh and Washington, D. C., about Dec. 3.

► **Pan American**—Pan Island Slick Airway's C-54 cargo plane for an indefinite period. PCA will supply flight crews and provide maintenance for the C-54 which will operate between Honolulu, Calif., and Newark, N. J.

► **Pan American**—Has refused sales on release an express shipment from Seattle to Alaska—\$30,718 value notes are being included on PANA's four Pacific DC-8s and will supplement APN's other aircraft already in use.

► **Pan American International**—Has recently reached a settlement agreement with Railway Labor Act.

► **Southwest**—Has signed a pact with Hertz Daily Use Self system providing car rental service at Los Angeles, Oakland, San Francisco, San Jose, Santa Barbara and Ventura, Calif. Passengers may make vehicle reservations over Southwest's telephone system.

► **United**—Reports to have all its DC-8s equipped with removable pinch gauges by the end of the year.

► **Western**—Has opened daily service linking San Francisco, Oakland, Los Angeles and Palo Alto, Calif.

## CIO Union Flays Airlines on Safety

Blaming recent accidents on a lack of sufficient flight personnel, the left-wing Transport Workers Union of America (TWU) has published literature warning that the airlines are cost-cutting safety with labor economy.

A TWU pamphlet titled "Red air safety" and headed in a Pan American Boeing DC-4 flying out of Miami alleged that "profit grabbing airlines at the expense of safety and the long-range interests of air transportation is a canard to all but the few who seek unwarranted 'welfare gains'." It added that "false economy" now permitted by government regulatory bodies and practiced by some airlines lead to "endless public confidence in the safety and stability of air transportation."

► **Class 16,000 Members**—The union, which claims to represent 16,000 employees of major domestic and international airlines, is demanding that every four-engine aircraft, and every plane of comparable capacity, be manned by a basic crew consisting of a captain, co-pilot, engineer, navigator, radio operator and at least two cabin attendants. TWU's membership consists of mechanics, inspectors, stewards, radio officers, stewards, stewardesses, pilots and clerks.

At a recent hearing before CAB, the union charged that airline management has "taken within CAB and CAA when they are able to influence and pressure." The union was withdrawn when Board members objected (Aerospace, Write Oct. 26).

► **UAL Accidents**—TWU claimed in its pamphlet that United Air Lines' accident on take off at LaGuardia Field, May 28, would have been prevented if the crew had included a flight engineer and that the crash of a PCA DC-4 into West Virginia, manufacturing on June 11, "might have been avoided had a navigator been aboard."

The union charged that two engines failed "because of inadequate overhaul and inspection" on the Pan American aircraft involved in Santa Barbara June 19. CAA's report on the mishap has not been issued.

The particular flight may be up to the sub-structure to prove the operation of the Stinson's mechanical steering system. The steering system that will give you four-foot color notes that at 15,000 feet—no level above phone conversations at 15,000 feet.

► **AA Sleeper Service**—American Airlines was scheduled to inaugurate the first prototype business-class sleeper service last week, with DC-8s making the run between New York and Los Angeles.

Eight upper and lower berths located in the service aisle of the DC-8 cabin does will be available for an extra charge of \$90. The planes will have 36 seats in the forward section.



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## Wattman Denied Puerto Rican Route

Request of Wattman Steamship Corp. and Wattman Airlines to open air service between New Orleans and San Juan, Puerto Rico, has been turned down by CAB despite Wattman's offer to conduct the service without mail pay.

The Board declined that public convenience and necessity did not require new air transportation between New Orleans and Puerto Rico because of the low traffic potential. It noted that the question of Wattman Airlines' tieup with Wattman Steamship Corp. was not considered since the route application was denied on its own merits.

In rejecting the link, Wattman asserted that the operation would be without cost to the government since no authority was sought to carry mail. CAB denied the validity of this claim.

"Such traffic as might flow through the proposed service would be a diversion from existing certificated air carriers," CAB declared. "Such a diversion would result in a reduction in service to these carriers and might require that the rate of mail compensation paid by the government to them be mutually increased. The fact that an applicant is willing to accept a certificate which does not authorize the carriage of mail does not decrease in diminishing the chance of carrier loss in authorizing a new route."

## CAB Urges Penalty Against AA Pilot Sisto

Civil Aeronautics Administrator T. F. Wright has recommended that CAB revoke or suspend the pilot's license of Charles R. Sisto, the check pilot accused of interfering with the gut lark of an American Airlines DC-4 over Miami Ridge, Tex., on Oct. 8.

Sisto's actions caused the plane to plummet down 4,000 to 100 ft before the cockpit could pull it out of the dive, a CAB accident report had disclosed (Aviation Week, Oct. 27). Wright and passengers at involved at Sisto's license was published because the check pilot certified on his logbook reported the aircraft to be as to endanger the lives and property of others can try to persuade all the Civil Air Regulations. Sisto recently resigned from American Airlines.

## Service to Delaware

Delaware is slated to become the 46th state to receive scheduled commercial air service on Nov. 28 when American Airlines and TWA inaugurate daily schedules to New Castle County, Airport.



been increased from 45,525,575 to 47,122,478. American's first on Nov. 1 is dated 35 DC-6s, 46 DC-4s and 61 DC-1s.

## Robert Wilson Takes Air Cargo, Inc., Post

Robert Wilson, formerly supervisor of ground transportation for Northwest Airlines, has been appointed regional manager of the south central states for Air Cargo, Inc., with headquarters at Dallas, Tex. He will be responsible for the corporation's field activities in Kansas, Texas, Oklahoma, Arkansas, Louisiana and New Mexico.

At the same time, Colonel Airlines named William V. McLaughlin as director of cargo sales. Recently with "Face McLaughlin has recently been assistant to the vice president of Air Express International, New York.

Other industry developments

- **Woods Airways**—Ole E. Thorsen has been appointed to the south central states as director of sales and distribution.
- **Western States Airways**—Ole E. Thorsen has been appointed to the south central states as director of sales and distribution.
- **Continental Airlines**—Ole E. Thorsen has been appointed to the south central states as director of sales and distribution.
- **Delta Airlines**—Ole E. Thorsen has been appointed to the south central states as director of sales and distribution.
- **Eastern Airlines**—Ole E. Thorsen has been appointed to the south central states as director of sales and distribution.
- **Northwest Airlines**—Ole E. Thorsen has been appointed to the south central states as director of sales and distribution.
- **Southwest Airlines**—Ole E. Thorsen has been appointed to the south central states as director of sales and distribution.
- **Allegiant Air**—Ole E. Thorsen has been appointed to the south central states as director of sales and distribution.
- **JetBlue**—Ole E. Thorsen has been appointed to the south central states as director of sales and distribution.
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## BIRTHDAY SPEAKER

CAB Chairman James M. Lusk delivered the state salute at Key West, Fla., last month on the 20th anniversary of the American Airways' inauguration of daily international and mail passenger service. In commemoration of the date, special FAA planes displayed the special 50 mile flight from Key West to Miami, Cuba. Graphic charts in honor of the event were unveiled in both cities.

## American's Profit Up During Third Quarter

A net profit of \$1,272,514 after taxes during the third quarter has enabled American Airlines to meet its deficit for the first nine months of 1947 to \$1,314,776. The third quarter earnings this year were well above the \$462,555 net shown in the same 1946 period.

On Sept. 30, 1946, American had a net profit of \$370,637. The deficit on the same date this year is the result of a \$1,075,680 first quarter loss.

American stated it improved third quarter results resulted from increased gross income and reducing operating expenses on operating companies. Total operating revenues for the first nine months of 1947 were \$61,466,190, up 29 percent over the same 1946 period.

Passenger revenues for the first nine months of this year aggregated \$73,283,421, up \$1,027,756 or 28.7 percent over the corresponding 1946 period. Express and freight revenues in the first three quarters of 1947 totaled \$14,254,719, up 18 percent over the same 1946 period. Mail revenues increased to \$2,750,912 this year from \$2,357,604 in the first nine months of 1946.

Revenue passenger miles flown in the first nine months ended Sept. 30, 1947, totaled 1,104,435,376 against 918,496,951 in the like 1946 period. Plane miles

## NWA Using 20-2s

Northwest Airlines, which last month began using Martin 20-2s as seasonal aircraft on runs between the Twin Cities and New York, plans to start large-scale operations with the new craft shortly. Six 20-2s were on hand Nov. 1, and delivery on the last of the 10 plane order is expected by Dec. 1.

## CAB SCHEDULE

- Nov. 15. Publishing conference on additional service in Birmingham, Ala. (Deadline 11:30 a.m.)
- Nov. 16. Publishing conference on routes in Birmingham of Detroit Air Transport Line (Atlantic, October 1947).
- Nov. 18. Meeting on TWA, E.A., foreign air mail service (closed and administrative) at Chicago, Ill. and Detroit, Mich.
- Dec. 3. Meeting on TWA's application for international service from Chicago to Cleveland, Akron, and Detroit (Chicago, October 1947 and 1948).
- Dec. 4. Meeting on TWA's proposed route between Miami, D.C., and Boston (Birmingham, October 1947).
- Dec. 5. Meeting on TWA's application for international service from Chicago to Cleveland, Akron, and Detroit (Chicago, October 1947 and 1948).



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## We Stand Alone

According to well informed aeronautical engineers both in this country and abroad, Britain's early lead in jet-propelled high speed flight has been wiped out. More ominous is the growing realization that England's entire high speed program is hopelessly bogged down. These factors support such conclusions:

The Air Ministry's shambolic plotted high speed flight research over a year ago, following the death of Geoffrey de Havilland.

The supply program has taken a decidedly dim view of the country's pitiful flight research program now in progress, in view of the abundance of U. S. data on the subject, showing us to be about two years ahead of the British.

The jet bomber program seems both stalled, with two designs contracted for a year ago now far outland by U. S. types.

So, according to reliable advice from across the Atlantic, the Air Ministry is feeling more sheepish about like this. Let the U. S. carry the ball on high speed research, and on jet bomber development. Let Britain concentrate on jet activities with their attractive commercial possibilities.

Looking at the immediate future are short nations for Britain's military aircraft business, both research and development. The lesson should be obvious to the area in Washington with responsibility for appropriating funds for the task air force that could be given the ability to preserve the peace of the world.

## The DC-6 Will Win Out

The quick and voluntary action of American, United and National Air Lines in purchasing their DC-6 from parts following the safe landing of a Boeing 367 of American at Gallup, N. M., is convincing and heartening. It was not only the best possible decision, despite numerous negative publicity, in the public relations people use. In the long run it will do more to increase the public's confidence in airline safety policies than any number of defensive press releases which would have attempted to explain why we design in constant use to operate the airline's newest transport. The grounding action was taken by the lines, and with the airline's own recommendations, despite a rather strong criticism among engineers that they already knew the source of the difficulty.

Fortunately, the industry will move on rapidly that it formulated any similar grounding order by the Civil Aeronautics Administration for these three airlines.

Although a difficult and discouraging experience at the moment, we forecast that the DC-6 will come through it not only unscathed in public opinion, but building new confidence as a result of its improvements.

## The Passenger Loses

With a flurry of publicity, American and United Airlines have begun organizing and terminating all of their passengers at a new airline terminal in Chicago. The room is well furnished, with an information desk, a bottle to hand of arriving and departing flights, a news and cigar stand, public telephones, comfortable furniture, and of all things, wind rooms.

The newspapers say the new terminal is designed "to increase the convenience of air travel." That is sheer baloney.

After twenty years of widespread public waiting about remote locations of airports, inferior service of passengers at outrageous fares, and general agreement in the industry that ground operations must be revolutionized for the convenience and speedy handling of the public, what do we see being done by two of our major airlines? (It is said the other airlines will follow, we hope next.)

Then, choose a location on the barren Chicago River front where few passengers ever wanted to go, at LaSalle and Wacker Drive, outside the downtown Loop, ten miles from the hotel center, blocks from the subway, no closer to the elevated, not even on a better line. The only possible reason of public transportation for the unfortunate passenger to reach or leave the terminal is the chance taxi, and did you ever try catching a cab on a rainy evening in downtown or suburban Chicago?

Tenaciously the airlines are still picking up passengers in the Palmer House area, where most people buy their tickets from most of the airline's famous salesmen. (You can't buy a ticket at the new terminal.) That would be inconspicuous! For a few days the airlines passed up the Stevens Hotel completely, on their way to the airport. After all, even though it was called by the world's largest hotel, it was destined of least of the new business route. Last squads from the offering public, however, resulted in recognition of service to the Stevens.

Although airline people claim the city demanded that business migration at the Palmer House be eliminated, the new location is atrocious and if it sets a pattern for similar action in other cities the airlines are in for more trouble, and red ink, than they realize.

More and more, the airlines are forgetting the passenger. This is the best proof we have seen lately.

ROBERT H. WOOD

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